# OBSERVATIONS AT THE HIBERNIA OIL FIELD SITE, OCTOBER 1997

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## ABSTRACT

K. S. Saunders, S. E. Cobanli, R.R. Whalen, , K. Lee, T. M. Schell, D.K. Muschenheim, T. G. Milligan and M.R. Anderson. Observations at the Hibernia Oil Field Site, October 1997.

In July 1995, the C.C.G.S. *Parizeau* carried out a sampling program to determine the background levels and characteristics of the naturally occurring particulate materials at the Hibernia development field. (Mission 97-053) This sampling program was repeated in 1997 to define the extent of drilling waste dispersion around the operational Hibernia GBS platform and examine the microbial activity near the GBS. Stations were occupied along transects running north-south and east-west from the Hibernia GBS. Two twenty-four hour anchor stations were occupied at 1.0 km and 2.5 km southwest of the GBS (in the direction of the predicted mean current drift). Samples were collected from the water column and benthic boundary layer using Niskin bottles, BOSS, CABLE and Slurper. Results showed low concentration of total suspended particulate matter and inorganic suspended sediments that were comparable to background levels collected on Mission 95-013.

## RÉSUMÉ

K.S. Saunders, S.E. Cobanli, R.R. Whalen, K. Lee, T.M. Schell, D.K. Muschenheim, T.G. Milligan et M.R. Anderson. Observations sur le site du champ pétrolifère Hibernia, octobre 1997.

En juillet 1995, le NGCC *Parizeau* a effectué un programme d'échantillonnage pour déterminer les concentrations et les caractéristiques des matières particulaires présentes naturellement sur le site d'exploitation d'Hibernia (Mission 97-053). Ce programme d'échantillonnage a été répété en 1997 afin de délimiter l'étendue de la dispersion des résidus de forage autour de la plate-forme à structure gravitaire (GBS) d'Hibernia, et d'examiner l'activité microbienne près de la structure. Des stations ont été utilisées le long d'axes transversaux nord-sud et est-ouest par rapport à la structure d'Hibernia. Deux stations de mouillage vingt-quatre heures ont été occupées à 1,0 km et 2,5 km au sud-ouest de la structure (en direction de la dérive de courant moyenne prévue). Des échantillons ont été recueillis dans la colonne d'eau et dans la couche benthique limite à l'aide de bouteilles Niskin et d'appareils BOSS, CABLE et Slurper. Les résultats révèlent de faibles concentrations de particules et de sédiments minéraux en suspension, comparables aux teneurs naturelles mesurées lors de la Mission 95-013.

## INTRODUCTION

The Hibernia oil field is located 315 kilometers east southeast of St. John's Newfoundland, within the Jeanne d' Arc Basin on the northeast portion of the Grand Banks of Newfoundland. The Gravity Base Structure (GBS) was positioned at the Hibernia field (46°45.03' N, 48° 31.15' W) on June 6, 1997 (Figure 1). Drilling operations began in July 1997 and oil production followed five months later on November 17, 1997.

Hydrocarbons within the Hibernia field occur in two principal formations: the Hibernia sandstone and the Avalon sandstone (HMDC, 1996), which contain three billion barrels of oil in place with estimated recoverable reserves at 615 million bbl of crude oil. Mobil Oil Canada Ltd. has increased the original reserve estimates to 750 million bbl and the peak production should increase to 180,000 barrels a day. (Oil & Gas Journal, 1998) The oil field is estimated to be in production from 1997 to 2015, or longer (HMDC, 1996).

A sampling program funded by the Program for Energy, Research and Development (PERD), was conducted in July 1995 from the C.C.G.S. *Parizeau*. The main objective of this Mission (95-013) was to examine the background levels and characteristics of the naturally occurring particulate materials at the planned Hibernia development field (Milligan et al., 1997). Mission 97-053 repeated the original sample grid to define the extent of drilling waste dispersion around the GBS platform and examine the microbial activity near the GBS. Three pieces of sampling gear were added to the 1997 sampling program: the Moored Impacts Monitoring System (MIMS), the Velocity-Density-Vorticity (VDV) tripod (Trivett, 1996) and Compact Autonomous Benthic Layer Explorer (CABLE).

MIMS was developed at the Bedford Institute of Oceanography to assist researchers in the study of sediment transport at the benthic boundary layer around offshore drilling platforms. It consists of a large tripod supporting two VDV sensors, an S4 electromagnetic current meter, a digital silhouette camera, an Optical Backscatter Sensor (OBS), a pressure sensor and altimeter. (Belliveau et al., 1997b)

The CABLE package is used to study the concentration and size distribution of *in situ* suspended material and to collect water samples from the benthic boundary layer. It supports a silhouette floc camera (film or digital), optical backscatter sensor (OBS), pressure sensor and two 1.7 liter Niskin bottles (Belliveau et al., 1997a).

The oceanographic objectives of Mission 97-053 were to collect suspended particulate material in the water column and benthic boundary layer and to obtain imaging data to survey the extent of particulate drilling waste dispersion around the GBS platform (0.6 km to 20 km).

Corresponding microbiological analysis were conducted to examine spatial changes in microbial activity surrounding the GBS. The discharge of drilling wastes as well as other organic components may alter microbial activity, which would define an area or "impact zone" from the drilling operations. Changes in microbial activity or production may also be reflected in the ecosystem at different trophic levels. To monitor changes in bacterial activity, relative heterotrophic activity, bacterial productivity, and relative potential hydrocarbon respiration experiments were conducted, and samples for bacterial enumeration were collected. Trophic manipulation experiments were also performed to determine if microbial rate processes in the Benthic Boundary Layer were affected by drilling waste discharges.

To measure possible inputs of nutrients from the GBS and related operations, samples were collected for nitrate+nitrite, phosphate, and ammonia from all transect stations.

## SAMPLING PROCEDURES

The sampling program was carried out from the C.C.G.S. *Parizeau* from October 8 to October 20, 1997, the second leg of Mission 97-053. The methods employed were similar to those used in previous DFO studies around oil platforms on Sable Island Bank (Muschenheim et al., 1995; Muschenheim and Milligan, 1996). The program started with the deployment of the MIMS tripod at 46° 43.73' N, 48° 47.88' W, 2.5 km south of the Hibernia GBS. The VDV tripod was deployed three hundred meters from the MIMS tripod at 46° 43.73' N, 48° 48.08' W. These tripods were deployed for the duration of the sampling

program to provide data on currents and suspended particulate material and to test the performance of the VDV system.

Two twenty-four hour anchor stations were occupied at 1.0 km and 2.5 km southwest of the GBS (in the direction of the predicted mean current drift). During the first anchor station thirteen deployment cycles were completed, the second anchor station had twelve deployments. The deployment cycles consisted of Campod, CTD/Rosette, CABLE and Benthic Organic Seston Sampler (BOSS) every two hours. For each station, water column samples was collected from 5 L Niskin bottles at 1m, 25 m, 50 m, and near bottom depths (ranging from 74 to 101 m). The benthic boundary layer was sampled using CABLE and BOSS. The CABLE package had two 1.7 L Niskin bottles which collected water samples from a depth interval of 0.35-0.70 m above the bottom and the data were used for comparison with the OBS sensor readings at deepest depth, which was set to 0.5 m above the bottom. BOSS collected water samples from 0.05 to 0.50 m above the seafloor (Muschenheim et al., 1995). These samples were pooled from 0.05-0.25 m and 0.35-0.50 m above the bottom to give representative samples from 0.15 m and 0.42 m above the bottom. For comparative purposes, water samples from each station were split for particulate and microbiological analyses.

Four transect lines were sampled in a north, south, east and west direction from the Hibernia GBS platform. Each transect line consisted of seven stations at distances of 0.6, 1.0, 1.5, 2.5, 5.0, 10 and 20 km from the GBS platform (Figure 2). Deployments of the Campod, CTD and CABLE were successful on the south transect, west transect and five stations on the north transect. Sampling on the east transect line was limited to CABLE deployments due to deteriorating weather conditions. The positions of all transect and anchor stations are given in Table 2.

Imaging data were obtained using the Campod , CABLE and Bottom Referencing Underwater Towed Instrumentation Vehicle (BRUTIV) packages. High resolution video imaging through the water column and 35mm color still photographs of the seafloor were obtained on each deployment of the Campod at the anchor stations and most of the transect stations with the exception of stations HN3 to HN6 and HE0 to HE6. The CABLE package had a Benthos 373 plankton film camera, which took still photographs at 5 second intervals as it was lowered through the water column. Imaging data from the Benthos camera was collected at all anchor and transect stations. BRUTIV was deployed to obtain color video imaging of the seafloor along three survey lines located around the Hibernia GBS structure. The first survey line was located from BR1 (46° 44.70' N, 48° 49.17' W) to BR2 (46° 44.78' N, 48° 44.36' W), the second survey line BR3 (46° 44.47' N, 48° 42.23' W) to BR4 (46° 45.14' N, 48° 39.20' W) and the third survey line BR5 (46° 44.11' N, 48° 48.26' W) to BR6 (46° 46.80' N, 48° 46.10' W). Results from the imaging data will not be discussed in this data report.

## METHODS

### Suspended Sediment Analyses

Water samples were collected for particle size analysis from the sediment-water interface (Slurper), 1m, 25 m, 50 m, and bottom depth Niskin bottles, CABLE and BOSS. Known volumes of water were filtered onto pre-weighed 0.8 µm, 47mm AAWP Millipore filters using standard gravimetric methods (Winneberger et al., 1963, Kranck and Milligan, 1979). The samples were placed in a drying oven at < 60°C for 24 hours and then stored for re-weighing in the lab.

The samples were placed in individual desiccant pots prior to re-weighed on a Mettler AE163 balance (±0.05 mg) to determine the total suspended particulate matter (SPM) values in g $m^{-3}$ (Winneberger et al., 1963). The samples were placed in a low temperature asher (LTA-504, LFE Corp. Waltham, Mass., USA) to remove the cellulose membrane filter and the organic matter. After ashing, the samples were treated with an excess of 30% ACS grade $H_2O_2$ to remove any remaining organic residue (Kranck and Milligan, 1979).

The inorganic suspended sediments were resuspended in an electrolyte solution of 1% NaCl and disaggregated using a sapphire-tipped ultrasonic probe (LX2020 Sonicator®, Heat Systems Ultrasonics Inc., Farmingdale, N.Y.) before particle size analysis on a Coulter® Multisizer IIe. The Coulter® Multisizer IIe is a multichannel, electroresistance particle size analyzer, which measures particles sizes within the range of

0.4 to 1200 µm. (Coulter, 1991). Inorganic suspended sediment analyses were completed using the methods and procedures outlined in Milligan and Kranck, (1991).

The particle size distributions for the Niskin, BOSS and CABLE samples are expressed as volume/volume concentration in parts per million (PPM) and are plotted using SigmaPlot version 2.0, as log concentration PPM versus log diameter in microns (Milligan and Kranck, 1991). The inorganic PPM represents the sum of all the volumes over the complete size range for a sample (Tables 2, 3, 4). Samples from the Slurper were screened at 160 µm before size analysis to remove the sands. The Slurper samples are represented as % concentration normalized over the size range analyzed. (Milligan et al., 1997)

## Microbiological Methods

### Relative Heterotrophic Activity ($^{14}$C glutamic acid)

The relative heterotrophic activity of water samples collected from different depths was determined by quantifying the uptake rate of a radiolabeled organic substrate ( $^{14}$C glutamic acid), added at one substrate concentration (Griffiths et al., 1977). Experiments were conducted on water column (CTD/rosette) and benthic boundary layer samples (BOSS/CABLE) collected from the 0.6 km and 20 km stations of each transect where deployments were successful, and at time 0, 6, 12, and 18 hours of the 2 anchor stations.

For each depth, 4 replicate 10 mL samples were dispensed into glass test tubes, followed by the addition of 0.2µCi of $^{14}$C(U)-glutamic acid (Mandel/NEN, specific activity 257.5 mCi/mmol). Blanks were prepared by adding 1 mL of 6N $H_2SO_4$ to 1 of the samples for each depth prior to isotope addition. Tubes were capped with respiration traps, which consisted of a rubber stopper fitted with a plastic center well cup (Kontes Scientific Glassware), containing a folded Whatman ®GF/C filter. All samples were incubated in the dark for 4 hours at ambient water temperatures: (11°C for 1m and 25 m and 2°C for all remaining depths). At the end of the incubation period, metabolic activity was terminated, and $^{14}CO_2$ expelled by injecting 1 mL of 6N $H_2SO_4$ into each tube. The expelled $^{14}CO_2$ was collected on the GF/c filter, which was soaked with 0.1 mL of ß-phenethylamine ($CO_2$ adsorbant).

The GF/C filters for respiration were recovered 12 hours later and placed in glass scintillation vials along with 10 mL of liquid scintillation cocktail (Beckman ®Ready Safe). The water samples for uptake were filtered onto 0.22µm Millipore® filters, rinsed with filtered (0.22µm) seawater and placed in glass scintillation vials along with 1 mL of ethyl acetate to dissolve the filters before addition of liquid scintillation cocktail.

Radioactivity of samples was measured using a Beckman® LS 3801 liquid scintillation counter, and expressed as disintegrations per minute (DPM). The rates of uptake and respiration were calculated as ng/L/hr, (Parsons et al. 1983), and summed to determine gross uptake.

### Bacterial Productivity ($^{3}$H thymidine)

The incorporation of $^{3}$H thymidine into bacterial deoxyribonucleic acid (DNA) is considered to be a measure of heterotrophic growth. (Fuhrman and Azam, 1982). Methods used to determine bacterial productivity using the thymidine method in the water column were adapted from Bell (1993), and Li et al., (1993). Thymidine experiments were conducted on water column and benthic boundary layer samples from 0.6 km, 3 km, 10 km, and 20 km stations of each transect where deployments were successful, and at time 0, 6, 12, and 18 hours for both anchor stations.

For each depth, duplicate 32 mL samples were measured into 50 mL culture tubes. $^{3}$H thymidine [Methyl-3H] (Mandel/NEN, specific activity 89.1 Ci/mmol ) was added to each tube to a final concentration of 0.3µCi/mL. One tube from each depth was incubated in the dark at ambient water temperatures for 3 hours. (1m and 25 m incubated at 11°C and all other depths at 2°C). From the second tube, triplicate aliquots of 10 mL were filtered immediately onto 0.2 µm Nuclepore® polycarbonate membrane filters, (time 0 filtration), rinsed with 0.2µm filtered seawater, folded and placed in glassine envelopes and frozen at -20 °C until analysis. Filtration was repeated after the 3 hour incubation for all remaining tubes.

The extraction procedure of radiolabeled macromolecules was performed in the lab. Frozen filters were placed in test tubes at 0° C to thaw for 15 minutes. Five mL of cold trichloroacetic acid solution (TCA), 5% (v/v) were added to each tube, and filters remained in the TCA solution at 0°C for 20 minutes before filtration onto Whatman® GF/F filters. Filters were rinsed with 5% TCA, and 95% ethanol, and then placed in scintillation vials for digestion by addition of 250µL of hyamine hydroxide for 30 minutes at 55° C. After cooling, 50 µL of glacial acetic acid and 10 mL of liquid scintillation cocktail were added before measuring radioactivity (DPM).

Bacterial productivity (ng C/L/hr) was calculated using conversion factors from Ducklow and Carlson, (1992) for cells/mole, and from Li et al., 1993 for g C/cell.

**Relative Hydrocarbon Utilization Potential ($^{14}$C hexadecane)**

The potential utilization of hydrocarbons by bacteria was determined by measuring the respiration rate of added $^{14}$C labeled hexadecane. (Caparello and LaRock, 1975, Walker and Colwell, 1976). Hexadecane experiments were conducted on the 20 km station of the southern transect, and time 0 for both anchor stations.

n – [1-14C] Hexadecane (Amersham, specific activity 58 mCi/mmol), diluted in hexane (0.08µCi) was added to test tubes. Test samples were added following the evaporation of the hexane (15 minutes). For each depth, 4 replicate 10 mL samples were added to the tubes. Blanks were prepared by adding 1mL 6N $H_2SO_4$ to one of the 4 samples per depth. Tubes were then immediately capped with respiration traps described above and incubated in the dark for 4 days at 11°C. Activity was terminated by injecting 1 mL of 6N $H_2SO_4$ into each tube, and the expelled $^{14}CO_2$ was collected on the GF/C filter, which was soaked with 0.1 mL of ß-phenethylamine ($CO_2$ adsorbant).

The phenethylamine soaked filters were recovered 12 hours later, and placed in glass scintillation vials along with 10 mL of liquid scintillation cocktail. Radioactivity (DPM) was measured and the respiration of hexadecane was calculated as ng/L/hr.

**Trophic Manipulation Experiments**

Anchor stations were sampled at six hour intervals. For each site, water column samples were collected from the surface, 25m, 50m, and 75m. Three Benthic Boundary Layer (BBL) samples were also collected, 2 using BOSS and a third from the CABLE. Three time course manipulation experiments (Table 1) were conducted, one at each anchor station, and the third on the South Transect, 20 km from the rig (station HS6), over 36 hours.

Table 1. Six treatment flasks prepared for each experiment with mixtures of the various constituents. All volumes are in milliliters.

| Flask Number | BBL [1] | FBBL [2] | DW [3] | FDW [4] | OM [5] |
|---|---|---|---|---|---|
| 1 | 450 | 0 | 0 | 0 | 0 |
| 2 | 75 | 375 | 0 | 0 | 0 |
| 3 | 75 | 0 | 0 | 375 | 0 |
| 4 | 450 | 0 | 0 | 0 | 1 |
| 5 | 0 | 0 | 450 | 0 | 0 |
| 6 | 0 | 0 | 75 | 375 | 0 |

BBL [1] - Benthic Boundary Layer sample collected from CABLE.
FBBL [2] - Benthic Boundary Layer sample filtered at < 1 µm.
DW [3] - Deep Water sample collected from 50 m Niskin.
FDW [4] - Deep Water sample filtered at < 1 µm.

OM [5] - Organic Matter (Vegemite Bacteria Booster - 2 g yeast, 5 g peptone topped to 100 mL and autoclaved.)

Treatments were measured into 500 mL darkened Nalgene flasks, incubated on deck with flowing seawater, and samples were drawn at 0, 6, 12, and 24 and 36 hours. Samples were collected in 50 mL centrifuge tubes, preserved with gluteraldehyde, 2% v/v final concentration. Preserved samples were stored at approximately 5°C.

Cells were filtered onto Irglan black-stained 0.2 µm polycarbonate filters, poststained with acridine orange (Hobbie et al., 1977) and counted with an epi-fluorescent microscope. For each sample, duplicate filters were prepared (Rivkin and Anderson, 1997).

**Bacterial Numbers**

Samples for enumeration of bacteria were collected at each station and depth where microbiological experiments were conducted. One sample (40 mL) was collected from each depth in 60 mL glass bottles and 4 mL of freshly filtered (0.2µm) paraformaldehyde were added (1% v/v final concentration). Replicate samples were collected in 50 mL centrifuge tubes, preserved with gluteraldehyde, 2% v/v final concentration. Preserved samples were stored at 4-5° C.

Cells were filtered onto Irglan black-stained 0.2 µm polycarbonate filters, poststained with acridine orange (Hobbie et al., 1977) and counted with an epi-fluorescent microscope. For each sample, duplicate filters were prepared (Rivkin and Anderson, 1997).

**Nutrients**

Samples for nutrients (nitrite+nitrate, phosphate, and ammonia) were collected from all stations on each transect line. Samples were placed into plastic vials and immediately frozen at -20°C. Samples were analysed using a Technicon Autoanalyzer (Technicon Industrial Systems, 1972, 1973).

## RESULTS AND DISCUSSION

The S4 electromagnetic current meter was deployed for approximately five days between October 11 to October 16. Data were collected from the current meter every 30 minutes starting on the hour and sampled for a period of ten minutes with an average value taken for that time period. The current meter data showed an increase in current speeds starting on October 14 which corresponded to increasingly poor weather conditions. Deteriorating weather conditions resulted in the mooring having to be retrieved ahead of schedule.

Table 2 represents a listing of sample information for the transect stations including station number, GPS position, time in GMT, depth in meters, type of sampler, SPM g $m^{-3}$, inorganic PPM and identifier number. Tables 3 and 4 list similar information for the anchor stations HAS1 and HAS2.

**Transect Stations**

Tables 5 to 30 and Figures 4 to 12 represent the data and plots for the disaggregated inorganic grain size spectra for the transect stations.

The total SPM values for the Niskin samples on transect stations ranged from 0.30 to 4.09 g $m^{-3}$ with a mean of 0.76 g $m^{-3}$ and the inorganic suspended sediment values ranged between 0.004 to 0.152 PPM with a mean of 0.040 PPM. These values were similar to the background levels of Mission 95-013. The total SPM values for the 1995 Niskin samples on transect stations ranged from 0.19 to 5.91 g $m^{-3}$ with a mean of 0.75 g $m^{-3}$ and the inorganic suspended sediment values ranged between 0.005 to 0.141 PPM with a mean of 0.028 PPM. The total SPM values for the benthic boundary layer (CABLE) samples ranged from 0.35 to 10.18 g $m^{-3}$ with a mean of 2.14 g $m^{-3}$ and the inorganic suspended sediment samples ranged from 0.030 to 0.211 PPM with a mean of 0.106 PPM.

The disaggregated inorganic grain size spectra for the surface and 25 m samples were generally flat broad shaped distributions with lower PPM concentrations than the deeper water samples. The

irregular shape of the distributions can be attributed to very low counts across the size distribution pushing the limits of detection of the Multisizer IIe close to background levels. (Coulter, 1991) The disaggregated inorganic grain size spectra for the 50m , bottom depth and CABLE samples showed a distinct modal peak ranging between 8 and 11 microns and a definite lack of fine material compared to the surface and 25 m samples. The modal peak likely represented the remnants of an autumn phytoplankton bloom that was settling through the water column (Kranck, 1988, 1980). The Slurper samples tended to have a broader distribution with characteristics similar to the 50m, bottom depth and CABLE samples but lacked the strong modal peak. The disaggregated inorganic grain size spectra from Mission 95-013 for the transect stations tended to have a more rounded size distribution. (Milligan et al., 1997)

Tables 56 to 59 and Figures 27 to 33 represent data and plots for the bacterial productivity (Thymidine) and relative heterotrophic activity (Glutamic acid) experiments for the transect stations.

Bacterial abundance in the water column ranged from 1.03 to 3.43 $x10^8$ cells/liter and for the bottom benthic layer the abundance range was 1.28 to 3.27$x10^8$ cells/liter (Table 63 to Table 66).

**Anchor Stations**

The S4 electromagnetic current meter data obtained during anchor station HAS1 showed a minimum of 0.8 cm $s^{-1}$ and maximum at 15.6 cm $s^{-1}$ over the tidal cycle. Current meter data for anchor station HAS2 showed a range of 5.8 cm $s^{-1}$ to 30.8 cm $s^{-1}$.

Tables 31 to 55 and Figures 13 to 21 represent the data and plots of the disaggregated inorganic size spectra for the anchor stations. Figures 22 to 26 represent the SPM g $m^{-3}$ (triangles) and the inorganic PPM (circles) concentrations versus height above bottom for the Niskin, CABLE and BOSS samples for anchor stations HAS1 and HAS2.

The total SPM values for the Niskin samples on anchor station HAS1 ranged from 0.32 to 8.55 g $m^{-3}$ with a mean of 0.90 g $m^{-3}$ and the inorganic suspended sediment values ranged between 0.003 to 0.349 PPM with a mean of 0.050 PPM. The total SPM values for the CABLE samples on anchor station HAS1 ranged from 0.75 to 64.88 g $m^{-3}$ with a mean of 7.40 g $m^{-3}$and the inorganic suspended sediment values ranged from 0.076 to 0.173 PPM with a mean of 0.117 PPM. The total SPM for the BOSS samples at a depth of 0.05-0.25m above bottom ranged between 5.24 to 227.01 g $m^{-3}$ with a mean of 52.07 g $m^{-3}$ and the samples at a depth of 0.35-0.50 m above bottom ranged from 1.74 to 9.74 g $m^{-3}$ with a mean of 4.04 g $m^{-3}$. The inorganic suspended sediment values for the BOSS samples at a depth of 0.05-0.25 m above bottom ranged from 1.017 to 92.278 PPM with a mean of 13.627 PPM and the samples at a depth of 0.35-0.50 m above bottom ranged from 0.677 to 1.700 PPM with a mean of 1.161 PPM.

The total SPM values for the Niskin samples on anchor station HAS2 ranged from 0.28 to 3.19 g $m^{-3}$ with a mean of 1.09 g $m^{-3}$ and the inorganic suspended sediment values ranged between 0.005 to 1.455 PPM with a mean of 0.069 PPM. The total SPM values for the CABLE samples on anchor station HAS2 ranged from 0.70 to 4.73 g $m^{-3}$ with a mean of 1.82 g $m^{-3}$ and the inorganic suspended sediment values ranged from 0.004 to 0.337 PPM with a mean of 0.083 PPM. The total SPM for the BOSS samples at a depth of 0.05-0.25 m above bottom ranged from 3.27 to 795.89 g $m^{-3}$ with a mean of 200.74 g $m^{-3}$ and the samples at a depth of 0.35-0.50 m above bottom ranged from 2.27 to 177.64 g $m^{-3}$ with a mean of 23.51 g $m^{-3}$. The inorganic suspended sediment values for the BOSS samples at a depth of 0.05-0.25 m above bottom ranged from 0.164 to 196.423 PPM with a mean of 41.320 PPM and samples at a depth of 0.35-0.50 m above bottom ranged from 0.132 to 76.774 PPM with a mean of 9.717 PPM.

The disaggregated inorganic grain size spectra for the Niskin samples through the water column for anchor stations HAS1 and HAS2 had a similar shape and modal size range to the Niskin samples of the transect stations with a few exceptions. The disaggregated grain size spectra for the BOSS samples for anchor station HAS1 at a depth of 0.05 to 0.25 m above bottom showed resuspension of sands in the modal size range of 250 to 300 µm for HAS1.07, HAS1.10 and HAS1.12. BOSS samples at a depth of 0.05 to 0.25 m above bottom had a modal size range of 16 to 36.76 µm (excluding the resuspended sand mode) with a mean of 23.37 µm while samples at a depth of 0.35 to 0.50 cm had a modal size range of 24.52 to 55.72 with a mean value of 33.71 µm. The modal size for the BOSS samples at both depth intervals were the same at stations HAS1.06 (36.76 µm) and HAS1.13 (32.00 µm).

The disaggregated grain size spectra for the BOSS samples for the anchor station HAS2 showed resuspension of sands in the modal size range of 250 to 300 µm at both depth intervals for stations HAS2.01, HAS2.02 and at a depth interval of 0.05-0.25 m for HAS2.03, HAS2.04, HAS2.05 and HAS2.07. BOSS samples at a depth of 0.05-0.25 m had a modal size range of 8.00 to 42.22 µm (excluding the resuspended sand mode) with a mean of 16.70 µm while samples at a depth of 0.35-0.50 m had a modal size range of 9.19 to 36.76 µm with a mean value of 25.48 µm. The modal size for the BOSS samples at both depth intervals was the same as at station HAS2.09 (9.19 µm).

Table 60 and 61 and Figures 34 to 37 represent data and plots for the bacterial productivity (Thymidine) and relative heterotrophic activity (Glutamic acid) experiments for anchor station HAS1 and HAS2. Table 62 and Figure 38 represent data for relative hydrocarbon utilization potential (Hexadecane Respiration) at stations HS6, HAS2 and HAS1.

Anchor stations had ranges from 1.02 to 4.39 x$10^8$ cells/liter for the water column and for the bottom benthic layer from 1.32 to 2.90 x$10^8$ cells/liter (Table 67 and Table 68).

## Trophic Manipulation Experiments

Table 69 lists results of the trophic manipulation experiments. Stations HAS1 (1km) and HS6 (20 km control site) showed increased bacterial numbers in the treatments with DW. This was not observed at the station HAS2 (2.5 km) from the GBS. There was no effect of organic enrichment on the natural bacteria population, however in all 3 experiments, significant numbers of large chain-forming bacteria were found in the enriched treatment after 36 hours.

## SUMMARY

The total SPM values for the Niskin samples taken through the water column tend to be < 2.00 g $m^{-3}$ with a few exceptions which appear related to high % organic content (possibly phytoplankton). These values were similar to the background levels of Mission 95-013. The disaggregated inorganic size spectra for the Niskin samples on the transect stations and anchor stations at depths of 50 m, bottom depth and CABLE samples showed a modal peak of 8 to 11 µm and a definite lack of fine material compared to the surface and 25 m samples. The disaggregated inorganic grain size spectra from Mission 95-013 for the transect stations tended to have a more rounded size distribution (Milligan et al., 1997). The differences in the disaggregated inorganic size spectra from 1997 and 1995 were probably due to seasonal variations through the water column (Kranck, 1980). The disaggregated inorganic size spectra for the BOSS samples showed resuspension of sand in the modal size range of 250 to 300 microns for 3 out of 13 casts on anchor station HAS1 and 6 out of 12 casts for anchor station HAS2. The resuspension of sands in the BOSS samples showed no apparent correlation with the increased current speeds of the S4 current meter data over the tidal cycle.

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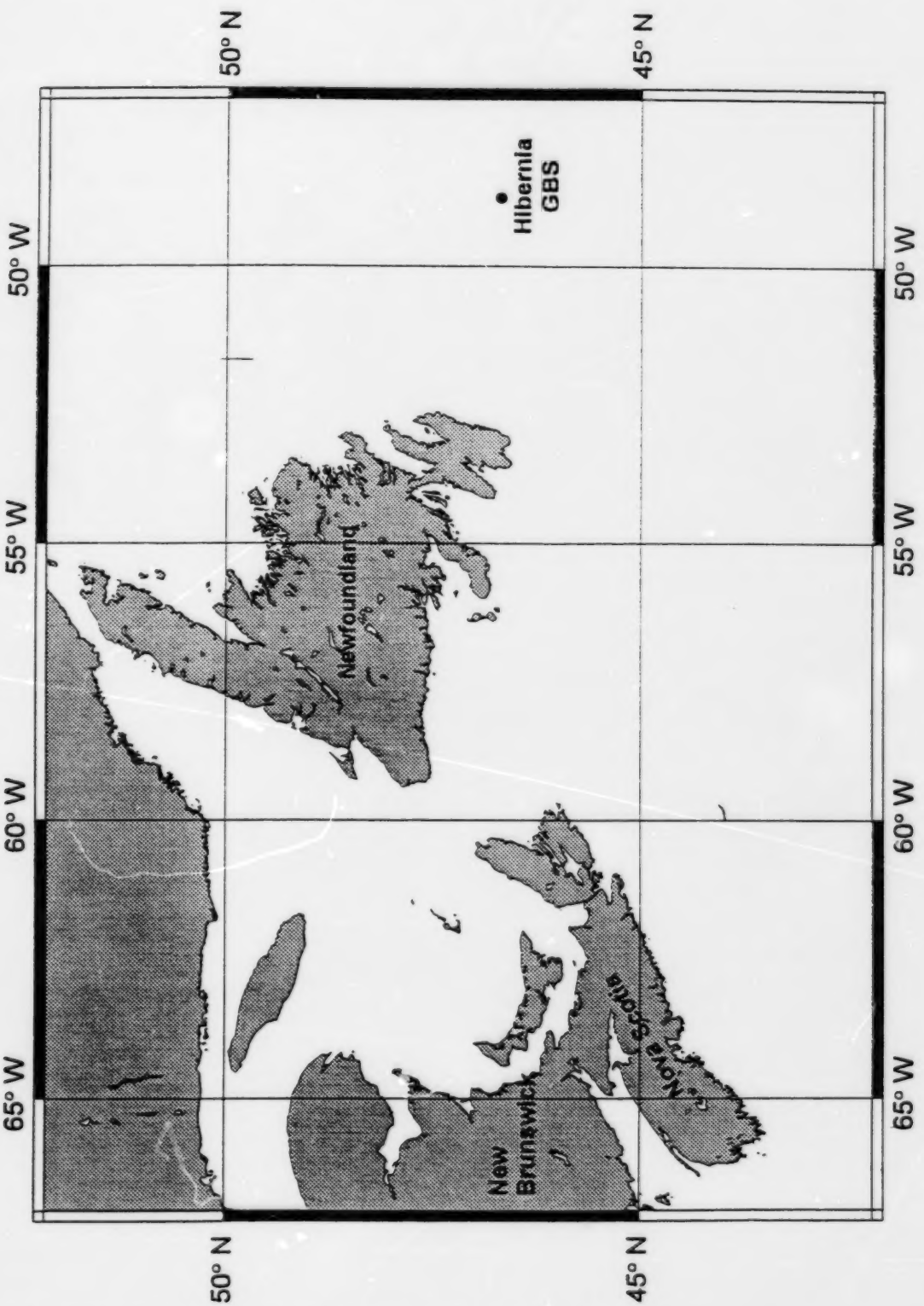


Figure 1. Location map shows the geographical position of the Hibernia GBS platform.

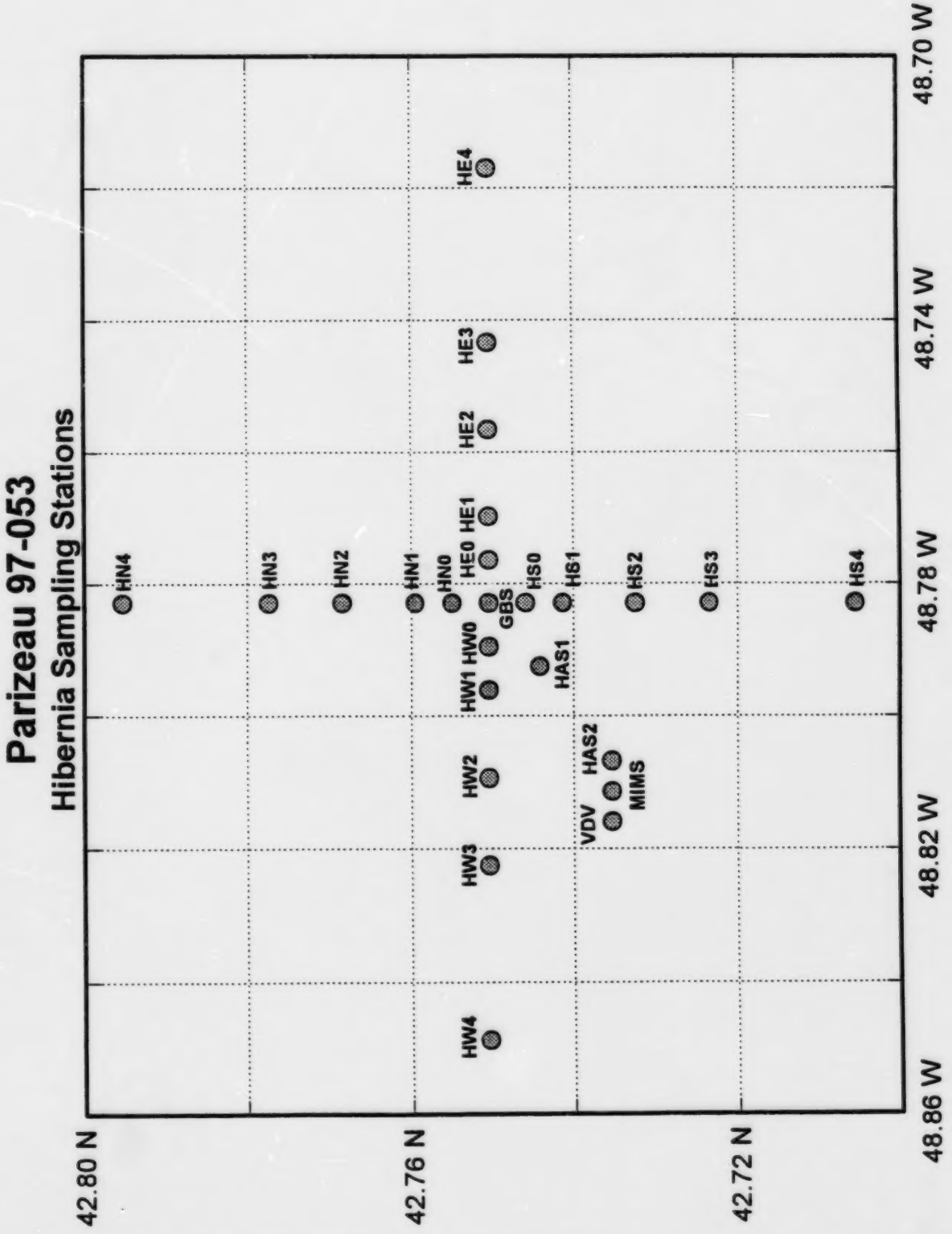


Figure 2. Station location plot for Parizeau 97-053 in decimal degrees. Additional stations at 10, 20 kms on the north, south, east and west transects.

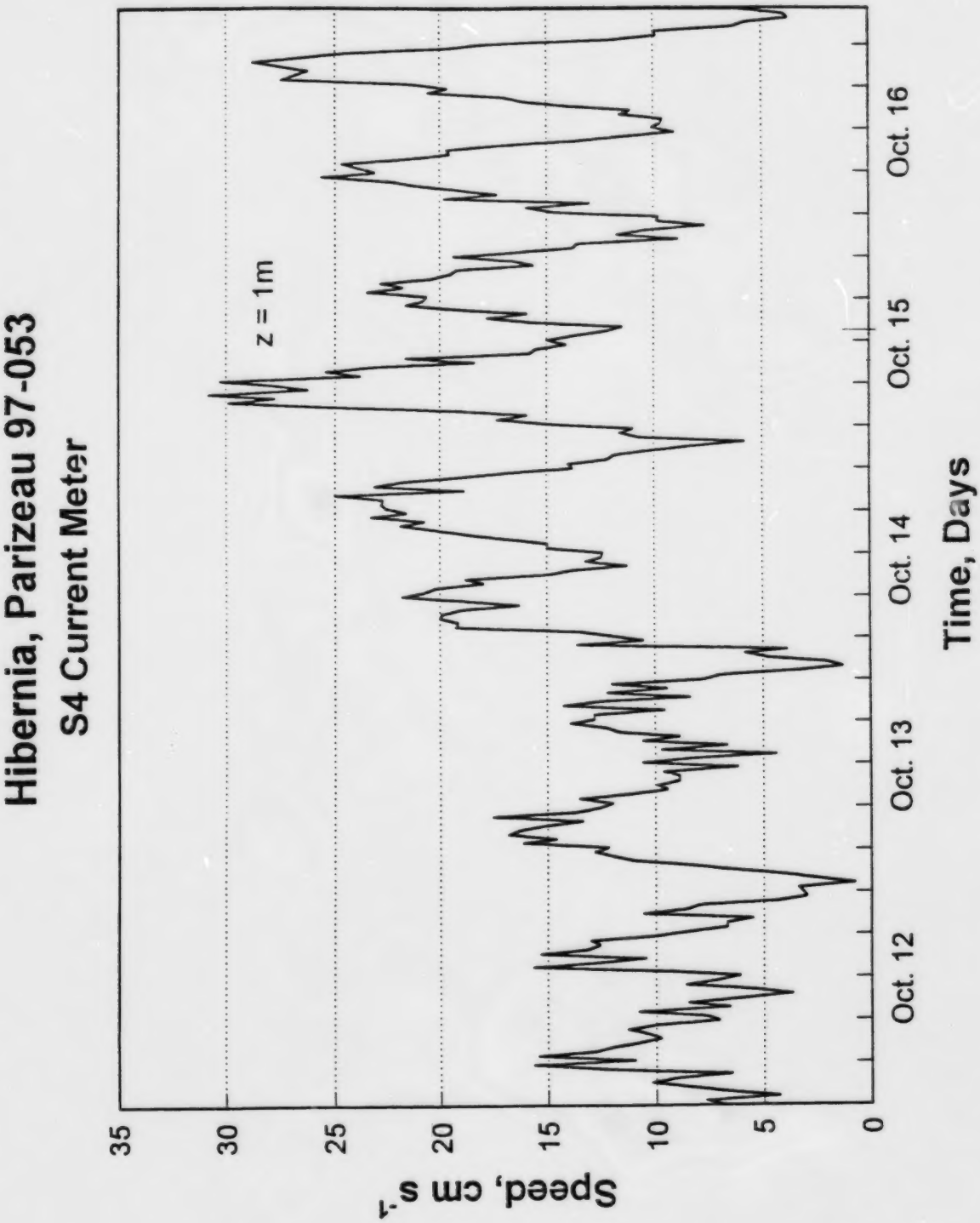


Figure 3. S4 electromagnetic current meter record from MIMS deployment. The S4 meter was moored 1.0 m above the seabed and the water depth was 80 m.

Table 2. Listing of sample information for transect stations.

| STN | Latitude | Longitude | TIME(GMT) | DEPTH(m) | SAMPLER | SPM g $m^{-3}$ | Inorg. PPM | ID NUMBER |
|---|---|---|---|---|---|---|---|---|
| HN0 | 46° 45.39' N | 48° 47.00' W | 22:49 | 1 | Niskin | 0.40 | 0.02033 | 971014077 |
| HN0 | | | 22:49 | 25 | Niskin | 0.49 | 0.01779 | 971014076 |
| HN0 | | | 22:49 | 50 | Niskin | 0.62 | 0.03561 | 971014075 |
| HN0 | | | 22:49 | 75 | Niskin | 1.50 | 0.07809 | 971014074 |
| HN0 | | | 22:59 | 83 | CABLE | 1.39 | 0.08598 | 971014078 |
| HN0 | | | 22:31 | 82 | Slurp | 2.06 | 0.38893 | 971014073 |
| HN1 | 46° 45.57' N | 48° 47.00' W | 00:19 | 1 | Niskin | 0.58 | 0.02549 | 971015004 |
| HN1 | | | 00:19 | 25 | Niskin | 0.36 | 0.01550 | 971015003 |
| HN1 | | | 00:19 | 50 | Niskin | 0.51 | 0.07685 | 971015002 |
| HN1 | | | 00:19 | 75 | Niskin | 0.38 | 0.05656 | 971015001 |
| HN1 | | | 00:30 | 83 | CABLE | 0.79 | 0.06275 | 971015005 |
| HN1 | | | 23:59 | 83 | Slurp | 11.77 | 2.48625 | 971014079 |
| HN2 | 46° 46.11' N | 48° 46.98' W | 01:54 | 1 | Niskin | 0.48 | 0.02377 | 971015010 |
| HN2 | | | 01:54 | 25 | Niskin | 0.59 | 0.01909 | 971015009 |
| HN2 | | | 01:54 | 50 | Niskin | 0.41 | 0.04266 | 971015008 |
| HN2 | | | 01:54 | 75 | Niskin | 0.35 | 0.05551 | 971015007 |
| HN2 | | | 02:06 | 83 | CABLE | 1.26 | 0.08210 | 971015011 |
| HN2 | | | 01:31 | 82 | Slurp | 6.07 | 0.94042 | 971015006 |
| HN3 | 46° 46.00' N | 48° 47.00' W | 13:12 | 1 | Niskin | 0.65 | 0.03051 | 971015015 |
| HN3 | | | 13:12 | 25 | Niskin | 0.39 | 0.02198 | 971015014 |
| HN3 | | | 13:12 | 50 | Niskin | 1.01 | 0.06176 | 971015013 |
| HN3 | | | 13:12 | 75 | Niskin | 0.30 | 0.04783 | 971015012 |
| HN3 | | | 13:27 | 81 | CABLE | 0.99 | 0.05685 | 971015016 |
| HN4 | 46° 47.72' N | 48° 46.94' W | 14:21 | 1 | Niskin | 0.56 | 0.02164 | 971015020 |
| HN4 | | | 14:21 | 25 | Niskin | 0.55 | 0.02136 | 971015019 |
| HN4 | | | 14:21 | 50 | Niskin | 0.40 | 0.07454 | 971015018 |
| HN4 | | | 14:21 | 75 | Niskin | 0.53 | 0.04276 | 971015017 |
| HN4 | | | 15:35 | 82 | CABLE | 0.35 | 0.03871 | 971015021 |
| HS0 | 46 44.49 N | 48 46.96 W | 00:18 | 1 | Niskin | 0.94 | 0.01452 | 971013004 |
| HS0 | | | 00:18 | 25 | Niskin | 0.33 | 0.03325 | 971013003 |
| HS0 | | | 00:18 | 50 | Niskin | 0.53 | 0.01038 | 971013002 |
| HS0 | | | 00:18 | 75 | Niskin | 0.40 | 0.04791 | 971013001 |
| HS0 | | | 00:37 | 80 | CABLE | 2.06 | 0.16671 | 971013005 |
| HS0 | | | 00:49 | 80 | Slurp | 10.96 | 0.69540 | 971013006 |
| HS1 | 46 44.49 N | 48 46.95 W | 22:59 | 1 | Niskin | 1.70 | 0.01332 | 971012091 |
| HS1 | | | 22:59 | 25 | Niskin | 0.57 | 0.01288 | 971012090 |
| HS1 | | | 22:59 | 50 | Niskin | 0.42 | 0.03447 | 971012089 |
| HS1 | | | 22:59 | 75 | Niskin | 0.43 | 0.05113 | 971012088 |
| HS1 | | | 23:17 | 80 | CABLE | 10.18 | 0.08795 | 971012092 |
| HS1 | | | 22:41 | 80 | Slurp | 35.67 | 0.43616 | 971012087 |
| HS2 | 46° 43.97' N | 48° 46.95' W | 21:33 | 1 | Niskin | 4.09 | 0.01331 | 971012085 |
| HS2 | | | 21:33 | 25 | Niskin | 0.54 | 0.00827 | 971012084 |
| HS2 | | | 21:33 | 50 | Niskin | 0.38 | 0.02670 | 971012083 |
| HS2 | | | 21:33 | 75 | Niskin | 0.57 | 0.06491 | 971012082 |
| HS2 | | | 21:47 | 79 | CABLE | 8.51 | 0.12261 | 971012086 |
| HS2 | | | 21:15 | 80 | Slurp | 757.73 | 3.52351 | 971012081 |
| HS3 | 46° 43.42' N | 48° 46.95' W | 20:13 | 1 | Niskin | 0.82 | 0.01920 | 971012079 |
| HS3 | | | 20:13 | 25 | Niskin | 0.75 | 0.00984 | 971012078 |
| HS3 | | | 20:13 | 50 | Niskin | 0.76 | 0.05588 | 971012077 |
| HS3 | | | 20:13 | 75 | Niskin | 0.81 | 0.06988 | 971012076 |
| HS3 | | | 20:26 | 80 | CABLE | 0.69 | 0.05335 | 971012080 |
| HS3 | | | 19:58 | 82 | Slurp | 205.43 | 2.66319 | 971012075 |

Table 2 cont. Listing of sample information for transect stations.

| STN | Latitude | Longitude | TIME(GMT) | DEPTH(m) | SAMPLER | SPM g $m^{-3}$ | Inorg. PPM | ID NUMBER |
|---|---|---|---|---|---|---|---|---|
| HS4 | 46° 42.32' N | 48° 46.99' W | 18:50 | 1 | Niskin | 0.79 | 0.01204 | 971012073 |
| HS4 | | | 18:50 | 25 | Niskin | 0.74 | 0.01077 | 971012072 |
| HS4 | | | 18:50 | 50 | Niskin | 0.78 | 0.06663 | 971012071 |
| HS4 | | | 18:50 | 74 | Niskin | 1.12 | 0.08586 | 971012070 |
| HS4 | | | 19:02 | 79 | CABLE | 2.32 | 0.11287 | 971012074 |
| HS4 | | | 18:32 | 78 | Slurp | 4.62 | 0.56571 | 971012069 |
| HS5 | 46° 39.66' N | 48° 46.97' W | 17:34 | 1 | Niskin | 0.63 | 0.01084 | 971012067 |
| HS5 | | | 17:34 | 25 | Niskin | 0.68 | 0.01435 | 971012066 |
| HS5 | | | 17:34 | 50 | Niskin | 0.83 | 0.15245 | 971012065 |
| HS5 | | | 17:34 | 70 | Niskin | 1.08 | 0.11088 | 971012064 |
| HS5 | | | 17:51 | 79 | CABLE | 1.02 | 0.02958 | 971012068 |
| HS5 | | | 17:19 | 79 | Slurp | 15.62 | 2.53251 | 971012063 |
| HS6 | 46° 34.20' N | 48° 46.97' W | 15:27 | 1 | Niskin | 0.46 | 0.00658 | 971012061 |
| HS6 | | | 15:27 | 25 | Niskin | 0.52 | 0.01110 | 971012060 |
| HS6 | | | 15:27 | 50 | Niskin | 0.68 | 0.09761 | 971012059 |
| HS6 | | | 15:27 | 70 | Niskin | 1.19 | 0.13413 | 971012058 |
| HS6 | | | 16:27 | 74 | CABLE | 3.20 | 0.21110 | 971012062 |
| HE0 | 46° 44.73' N | 48° 46.57' W | 20:37 | 81 | CABLE | 0.59 | 0.12068 | 971016007 |
| HE1 | 46° 44.76' N | 48° 46.21' W | 20:20 | 81 | CABLE | 1.04 | 0.12095 | 971016006 |
| HE2 | 46° 44.68' N | 48° 45.39' W | 19:56 | 85 | CABLE | 1.33 | 0.12751 | 971016005 |
| HE3 | 46° 45.04' N | 48° 44.63' W | 19:35 | 84 | CABLE | 1.02 | 0.13019 | 971016004 |
| HE4 | 46° 45.03' N | 48° 43.06' W | 19:04 | 84 | CABLE | 1.04 | 0.11377 | 971016003 |
| HE5 | 46° 45.07' N | 48° 39.12' W | 18:25 | 92.5 | CABLE | 1.19 | 0.14456 | 971016002 |
| HE6 | 46° 45.05' N | 48° 31.14' W | 16:58 | 101 | CABLE | 0.70 | 0.15937 | 971016001 |
| HW0 | 46° 45.03' N | 48° 47.47' W | 17:53 | 1 | Niskin | 1.34 | 0.01224 | 971013046 |
| HW0 | | | 17:53 | 25 | Niskin | 0.92 | 0.00929 | 971013045 |
| HW0 | | | 17:53 | 50 | Niskin | 1.16 | 0.08883 | 971013044 |
| HW0 | | | 17:53 | 75 | Niskin | 0.97 | 0.08660 | 971013043 |
| HW0 | | | 18:09 | 82 | CABLE | 0.76 | 0.06926 | 971013047 |
| HW0 | | | 17:34 | 82 | Slurp | 46.41 | 11.58496 | 971013042 |
| HW1 | 46° 45.03' N | 48° 47.76' W | 16:24 | 1 | Niskin | 0.70 | 0.01265 | 971013040 |
| HW1 | | | 16:24 | 25 | Niskin | 0.92 | 0.00937 | 971013039 |
| HW1 | | | 16:24 | 50 | Niskin | 0.48 | 0.04298 | 971013038 |
| HW1 | | | 16:24 | 75 | Niskin | 0.40 | 0.04640 | 971013037 |
| HW1 | | | 16:39 | 81 | CABLE | 0.76 | 0.07118 | 971013041 |
| HW2 | 46° 45.01' N | 48° 48.57' W | 14:08 | 1 | Niskin | 0.66 | 0.01197 | 971013035 |
| HW2 | | | 14:08 | 25 | Niskin | 0.55 | 0.01136 | 971013034 |
| HW2 | | | 14:08 | 50 | Niskin | 0.32 | 0.06509 | 971013033 |
| HW2 | | | 14:08 | 75 | Niskin | 0.68 | 0.06870 | 971013032 |
| HW2 | | | 14:23 | 81 | CABLE | 0.91 | 0.07876 | 971013036 |
| HW2 | | | 13:56 | 80 | Slurp | 16.58 | 4.06969 | 971013031 |
| HW3 | 46° 45.02' N | 48° 49.34' W | 12:54 | 1 | Niskin | 0.62 | 0.01218 | 971013029 |
| HW3 | | | 12:54 | 25 | Niskin | 0.49 | 0.00421 | 971013028 |
| HW3 | | | 12:54 | 50 | Niskin | 0.44 | 0.05541 | 971013027 |
| HW3 | | | 12:54 | 75 | Niskin | 1.17 | 0.07836 | 971013026 |
| HW3 | | | 13:09 | 80 | CABLE | 0.61 | 0.07433 | 971013030 |
| HW3 | | | 12:43 | 80 | Slurp | 3.36 | 0.52452 | 971013025 |
| HW4 | 46° 45.03' N | 48° 50.94' W | 11:46 | 1 | Niskin | 0.86 | 0.01379 | 971013023 |
| HW4 | | | 11:46 | 25 | Niskin | 0.70 | 0.00813 | 971013022 |
| HW4 | | | 11:46 | 50 | Niskin | 0.98 | 0.02941 | 971013021 |
| HW4 | | | 11:46 | 75 | Niskin | 1.10 | 0.08997 | 971013020 |
| HW4 | | | 11:59 | 81 | CABLE | 0.91 | 0.09274 | 971013024 |
| HW4 | | | 11:31 | 81 | Slurp | 3.47 | 0.63507 | 971013019 |

Table 2 cont. Listing of sample information for transect stations.

| STN | Latitude | Longitude | TIME(GMT) | DEPTH(m) | SAMPLER | SPM g $m^{-3}$ | Inorg. PPM | ID NUMBER |
|---|---|---|---|---|---|---|---|---|
| HW5 | 46° 45.03' N | 48° 54.90' W | 10:08 | 1 | Niskin | 1.04 | 0.01021 | 971013017 |
| HW5 | | | 10:08 | 25 | Niskin | 0.77 | 0.01044 | 971013016 |
| HW5 | | | 10:08 | 50 | Niskin | 1.13 | 0.03631 | 971013015 |
| HW5 | | | 10:08 | 74 | Niskin | 1.51 | 0.14218 | 971013014 |
| HW5 | | | 10:24 | 77 | CABLE | 1.89 | 0.17195 | 971013018 |
| HW5 | | | 09:55 | 78 | Slurp | 4.00 | 0.55977 | 971013013 |
| HW6 | 46° 45.05' N | 49° 02.82' W | 08:37 | 1 | Niskin | 0.64 | 0.00785 | 971013011 |
| HW6 | | | 08:37 | 25 | Niskin | 0.77 | 0.00785 | 971013010 |
| HW6 | | | 08:37 | 50 | Niskin | 0.43 | 0.02876 | 971013009 |
| HW6 | | | 08:37 | 75 | Niskin | 1.62 | 0.07436 | 971013008 |
| HW6 | | | 08:52 | 80 | CABLE | 10.09 | 0.17832 | 971013012 |
| HW6 | | | 08:23 | 82 | Slurp | 16.24 | 4.16257 | 971013007 |

Table 3. Listing of sample information for anchor station HAS1.

| STN | Latitude | Longitude | TIME (GMT) | DEPTH(m) | SAMPLER | SPM g $m^{-3}$ | Inorg. PPM | ID NUMBER |
|---|---|---|---|---|---|---|---|---|
| HAS1.01 | 46° 44.49' N | 48° 47.19' W | 13:19 | 1 | Niskin | 0.42 | 0.01809 | 971011005 |
| HAS1.01 | | | 13:19 | 25 | Niskin | 0.46 | 0.01253 | 971011004 |
| HAS1.01 | | | 13:19 | 50 | Niskin | 0.32 | 0.05516 | 971011003 |
| HAS1.01 | | | 13:19 | 75 | Niskin | 0.39 | 0.05707 | 971011002 |
| HAS1.01 | | | 13:38 | 80 | CABLE | 0.75 | 0.13558 | 971011006 |
| HAS1.01 | | | 14:47 | (0.35-0.50) | BOSS | 9.74 | 1.69888 | 971011008 |
| HAS1.01 | | | 14:47 | (0.05-0.25) | BOSS | 87.81 | 2.23665 | 971011007 |
| HAS1.01 | | | 12:56 | 80 | Slurp | 1.80 | 0.47007 | 971011001 |
| HAS1.02 | | | 15:34 | 1 | Niskin | 0.54 | 0.01508 | 971011013 |
| HAS1.02 | | | 15:34 | 25 | Niskin | 0.51 | 0.01505 | 971011012 |
| HAS1.02 | | | 15:34 | 50 | Niskin | 1.78 | 0.21033 | 971011011 |
| HAS1.02 | | | 15:34 | 75 | Niskin | 0.84 | 0.06595 | 971011010 |
| HAS1.02 | | | 16:00 | 83 | CABLE | 0.98 | 0.14934 | 971011014 |
| HAS1.02 | | | 16:16 | (0.35-0.50) | BOSS | 3.00 | 0.80735 | 971011016 |
| HAS1.02 | | | 16:16 | (0.05-0.25) | BOSS | 8.37 | 1.29871 | 971011015 |
| HAS1.02 | | | 15:06 | 82 | Slurp | 2.34 | 0.26571 | 971011009 |
| HAS1.03 | | | 17:20 | 1 | Niskin | 0.87 | 0.01083 | 971011021 |
| HAS1.03 | | | 17:20 | 25 | Niskin | 0.74 | 0.00667 | 971011020 |
| HAS1.03 | | | 17:20 | 50 | Niskin | 1.01 | 0.02797 | 971011019 |
| HAS1.03 | | | 17:20 | 75 | Niskin | 0.90 | 0.04501 | 971011018 |
| HAS1.03 | | | 17:34 | 83 | CABLE | 1.02 | 0.12098 | 971011022 |
| HAS1.03 | | | 17:47 | (0.35-0.50) | BOSS | 3.56 | 1.69959 | 971011024 |
| HAS1.03 | | | 17:47 | (0.05-0.25) | BOSS | 7.84 | 2.15432 | 971011023 |
| HAS1.03 | | | 17:04 | 83 | Slurp | 2.24 | 0.46425 | 971011017 |
| HAS1.04 | | | 19:19 | 1 | Niskin | 0.79 | 0.00677 | 971011029 |
| HAS1.04 | | | 19:19 | 25 | Niskin | 0.58 | 0.00929 | 971011028 |
| HAS1.04 | | | 19:19 | 50 | Niskin | 0.49 | 0.05330 | 971011027 |
| HAS1.04 | | | 19:19 | 75 | Niskin | 0.93 | 0.07733 | 971011026 |
| HAS1.04 | | | 19:31 | 83 | CABLE | 1.92 | 0.12697 | 971011030 |
| HAS1.04 | | | 20:17 | (0.35-0.50) | BOSS | 3.84 | 1.42679 | 971011032 |
| HAS1.04 | | | 20:17 | (0.05-0.25) | BOSS | 20.37 | 2.36747 | 971011031 |
| HAS1.04 | | | 19:03 | 82 | Slurp | 11.09 | 1.92589 | 971011025 |
| HAS1.05 | | | 21:27 | 1 | Niskin | 0.33 | 0.00897 | 971011037 |
| HAS1.05 | | | 21:27 | 25 | Niskin | 0.60 | 0.00830 | 971011036 |
| HAS1.05 | | | 21:27 | 50 | Niskin | 0.36 | 0.05450 | 971011035 |
| HAS1.05 | | | 21:27 | 75 | Niskin | 8.55 | 0.08153 | 971011034 |
| HAS1.05 | | | 21:41 | 80 | CABLE | 64.88 | 0.12760 | 971011038 |
| HAS1.05 | | | 21:46 | (0.35-0.50) | BOSS | 1.74 | 0.73883 | 971011040 |
| HAS1.05 | | | 21:46 | (0.05-0.25) | BOSS | 13.88 | 1.09515 | 971011039 |
| HAS1.05 | | | 21:09 | 80 | Slurp | 15.60 | 1.90699 | 971011033 |
| HAS1.06 | | | 23:23 | 1 | Niskin | 0.41 | 0.01012 | 971011045 |
| HAS1.06 | | | 23:23 | 25 | Niskin | 0.75 | 0.02638 | 971011044 |
| HAS1.06 | | | 23:23 | 50 | Niskin | 0.57 | 0.07292 | 971011043 |
| HAS1.06 | | | 23:23 | 75 | Niskin | 0.54 | 0.08293 | 971011042 |
| HAS1.06 | | | 23:32 | 80 | CABLE | 1.17 | 0.09403 | 971011046 |
| HAS1.06 | | | 23:50 | (0.35-0.50) | BOSS | 2.60 | 0.93867 | 971011048 |
| HAS1.06 | | | 23:50 | (0.05-0.25) | BOSS | 8.69 | 1.31698 | 971011047 |
| HAS1.06 | | | 23:06 | 80 | Slurp | 113.67 | 1.20673 | 971011041 |
| HAS1.07 | | | 01:14 | 1 | Niskin | 0.77 | 0.00554 | 971012005 |
| HAS1.07 | | | 01:14 | 25 | Niskin | 0.51 | 0.00890 | 971012004 |
| HAS1.07 | | | 01:14 | 50 | Niskin | 0.43 | 0.34890 | 971012003 |
| HAS1.07 | | | 01:14 | 75 | Niskin | 0.59 | 0.08904 | 971012002 |
| HAS1.07 | | | 01:30 | 80 | CABLE | 2.58 | 0.07770 | 971012006 |

Table 3 cont. Listing of sample information for anchor station HAS1.

| STN | Latitude | Longitude | TIME (GMT) | DEPTH(m) | SAMPLER | SPM g $m^{-3}$ | Inorg. PPM | ID NUMBER |
|---|---|---|---|---|---|---|---|---|
| HAS1.07 | 46° 44.49' N | 48° 47.19' W | 02:06 | (0.35-0.50) | BOSS | 6.59 | 1.09635 | 971012008 |
| HAS1.07 | | | 02:06 | (0.05-0.25) | BOSS | 27.85 | 15.80804 | 971012007 |
| HAS1.07 | | | 01:02 | 80 | Slurp | 54.74 | 0.91823 | 971012001 |
| HAS1.08 | | | 03:15 | 1 | Niskin | 0.57 | 0.00524 | 971012013 |
| HAS1.08 | | | 03:15 | 25 | Niskin | 0.60 | 0.00846 | 971012012 |
| HAS1.08 | | | 03:15 | 50 | Niskin | 0.91 | 0.08890 | 971012011 |
| HAS1.08 | | | 03:15 | 75 | Niskin | 0.99 | 0.11614 | 971012010 |
| HAS1.08 | | | 03:34 | 80 | CABLE | 1.31 | 0.07553 | 971012014 |
| HAS1.08 | | | 03:51 | (0.35-0.50) | BOSS | 3.68 | 0.67737 | 971012016 |
| HAS1.08 | | | 03:51 | (0.05-0.25) | BOSS | 19.13 | 1.53842 | 971012015 |
| HAS1.08 | | | 03:05 | 80 | Slurp | 41.36 | 0.10619 | 971012009 |
| HAS1.09 | | | 05:19 | 1 | Niskin | 0.82 | 0.01753 | 971012021 |
| HAS1.09 | | | 05:19 | 25 | Niskin | 0.66 | 0.01256 | 971012020 |
| HAS1.09 | | | 05:19 | 50 | Niskin | 0.97 | 0.09949 | 971012019 |
| HAS1.09 | | | 05:19 | 75 | Niskin | 1.15 | 0.08793 | 971012018 |
| HAS1.09 | | | 05:55 | 82 | CABLE | 1.66 | 0.08218 | 971012022 |
| HAS1.09 | | | 06:08 | (0.35-0.50) | BOSS | 3.21 | 1.16576 | 971012024 |
| HAS1.09 | | | 06:08 | (0.05-0.25) | BOSS | 5.24 | 1.55333 | 971012023 |
| HAS1.09 | | | 05:12 | 82 | Slurp | 6.88 | 0.67686 | 971012017 |
| HAS1.10 | | | 07:20 | 1 | Niskin | 1.03 | 0.01178 | 971012029 |
| HAS1.10 | | | 07:20 | 25 | Niskin | 0.87 | 0.00273 | 971012028 |
| HAS1.10 | | | 07:20 | 50 | Niskin | 0.72 | 0.11063 | 971012027 |
| HAS1.10 | | | 07:20 | 75 | Niskin | 0.94 | 0.09040 | 971012026 |
| HAS1.10 | | | 07:32 | 82 | CABLE | 2.94 | 0.12456 | 971012030 |
| HAS1.10 | | | 07:46 | (0.35-0.50) | BOSS | 4.18 | 1.60245 | 971012032 |
| HAS1.10 | | | 07:46 | (0.05-0.25) | BOSS | 144.08 | 51.55055 | 971012031 |
| HAS1.10 | | | 07:05 | 82 | Slurp | 13.55 | 0.59580 | 971012025 |
| HAS1.11 | | | 09:19 | 1 | Niskin | 1.07 | 0.01094 | 971012037 |
| HAS1.11 | | | 09:19 | 25 | Niskin | 0.81 | 0.01062 | 971012036 |
| HAS1.11 | | | 09:19 | 50 | Niskin | 0.83 | 0.04358 | 971012035 |
| HAS1.11 | | | 09:19 | 75 | Niskin | 0.78 | 0.08286 | 971012034 |
| HAS1.11 | | | 09:32 | 82 | CABLE | 1.29 | 0.10590 | 971012038 |
| HAS1.11 | | | 09:44 | (0.35-0.50) | BOSS | 3.93 | 1.29466 | 971012040 |
| HAS1.11 | | | 09:44 | (0.05-0.25) | BOSS | 227.01 | 92.27781 | 971012039 |
| HAS1.11 | | | 08:04 | 82 | Slurp | 8.12 | 0.77142 | 971012033 |
| HAS1.12 | | | 11:21 | 1 | Niskin | 0.88 | 0.00782 | 971012045 |
| HAS1.12 | | | 11:21 | 25 | Niskin | 0.99 | 0.00580 | 971012044 |
| HAS1.12 | | | 11:21 | 50 | Niskin | 0.61 | 0.02505 | 971012043 |
| HAS1.12 | | | 11:21 | 75 | Niskin | 1.35 | 0.10725 | 971012042 |
| HAS1.12 | | | 11:33 | 82 | CABLE | 13.55 | 0.12650 | 971012046 |
| HAS1.12 | | | 11:45 | (0.35-0.50) | BOSS | 3.73 | 1.04228 | 971012048 |
| HAS1.12 | | | 11:45 | (0.05-0.25) | BOSS | 100.54 | 2.93586 | 971012047 |
| HAS1.12 | | | 11:02 | 82 | Slurp | 5.24 | 0.80317 | 971012041 |
| HAS1.13 | | | 13:28 | 1 | Niskin | 0.36 | 0.00468 | 971012053 |
| HAS1.13 | | | 13:28 | 25 | Niskin | 0.44 | 0.01081 | 971012052 |
| HAS1.13 | | | 13:28 | 50 | Niskin | 0.51 | 0.05606 | 971012051 |
| HAS1.13 | | | 13:28 | 75 | Niskin | 1.77 | 0.10207 | 971012050 |
| HAS1.13 | | | 13:38 | 81 | CABLE | 2.08 | 0.17260 | 971012054 |
| HAS1.13 | | | 13:52 | (0.35-0.50) | BOSS | 2.74 | 0.90439 | 971012057 |
| HAS1.13 | | | 13:52 | (0.05-0.25) | BOSS | 6.10 | 1.01675 | 971012056 |
| HAS1.13 | | | 13:05 | 81 | Slurp | 8.38 | 0.52707 | 971012049 |

Table 4. Listing of sample information for anchor station HAS2.

| STN | Latitude | Longitude | TIME(GMT) | DEPTH(m) | SAMPLER | SPM g $m^{-3}$ | Inorg. PPM | ID NUMBER |
|---|---|---|---|---|---|---|---|---|
| HAS2.01 | 46° 43.75' N | 48° 47.47' W | 19:21 | 1 | Niskin | 1.10 | 0.00613 | 971013052 |
| HAS2.01 | | | 19:21 | 25 | Niskin | 0.91 | 0.00603 | 971013051 |
| HAS2.01 | | | 19:21 | 50 | Niskin | 0.51 | 0.01535 | 971013050 |
| HAS2.01 | | | 19:21 | 75 | Niskin | 0.92 | 0.03541 | 971013049 |
| HAS2.01 | | | 19:32 | 80 | CABLE | 2.23 | 0.33679 | 971013053 |
| HAS2.01 | | | 20:03 | (0.35-0.50) | BOSS | 177.64 | 33.55072 | 971013055 |
| HAS2.01 | | | 20:03 | (0.05-0.25) | BOSS | 783.03 | 196.42329 | 971013054 |
| HAS2.01 | | | 19:03 | 80 | Slurp | 134.03 | 4.32098 | 971013048 |
| HAS2.02 | | | 21:25 | 1 | Niskin | 0.78 | 0.01109 | 971013060 |
| HAS2.02 | | | 21:25 | 25 | Niskin | 2.12 | 0.01440 | 971013059 |
| HAS2.02 | | | 21:25 | 50 | Niskin | 0.41 | 0.01218 | 971013058 |
| HAS2.02 | | | 21:25 | 75 | Niskin | 2.44 | 0.05221 | 971013057 |
| HAS2.02 | | | 21:41 | 80 | CABLE | 1.65 | 0.05177 | 971013061 |
| HAS2.02 | | | 21:55 | (0.35-0.50) | BOSS | 67.82 | 76.77394 | 971013063 |
| HAS2.02 | | | 21:55 | (0.05-0.25) | BOSS | 147.39 | 50.30232 | 971013062 |
| HAS2.03 | | | 23:20 | 1 | Niskin | 1.64 | 0.00757 | 971013068 |
| HAS2.03 | | | 23:20 | 25 | Niskin | 0.89 | 0.01185 | 971013067 |
| HAS2.03 | | | 23:20 | 50 | Niskin | 0.84 | 0.01589 | 971013066 |
| HAS2.03 | | | 23:20 | 75 | Niskin | 1.49 | 0.05802 | 971013065 |
| HAS2.03 | | | 23:34 | 80 | CABLE | 1.28 | 0.06414 | 971013069 |
| HAS2.03 | | | 23:54 | (0.35-0.50) | BOSS | 5.36 | 0.50624 | 971013071 |
| HAS2.03 | | | 23:54 | (0.05-0.25) | BOSS | 19.94 | 9.83251 | 971013070 |
| HAS2.03 | | | 23:06 | 80 | Slurp | 5.25 | 0.79159 | 971013064 |
| HAS2.04 | | | 01:18 | 1 | Niskin | 1.23 | 0.02245 | 971014005 |
| HAS2.04 | | | 01:18 | 25 | Niskin | 1.11 | 0.01704 | 971014004 |
| HAS2.04 | | | 01:18 | 50 | Niskin | 0.81 | 0.02517 | 971014003 |
| HAS2.04 | | | 01:18 | 75 | Niskin | 3.19 | 0.06122 | 971014002 |
| HAS2.04 | | | 01:32 | 80 | CABLE | 1.35 | 0.11668 | 971014006 |
| HAS2.04 | | | 01:47 | (0.35-0.50) | BOSS | 4.64 | 0.62281 | 971014008 |
| HAS2.04 | | | 01:47 | (0.05-0.25) | BOSS | 303.80 | 89.40883 | 971014007 |
| HAS2.04 | | | 01:00 | 80 | Slurp | 47.32 | 10.60599 | 971014001 |
| HAS2.05 | | | 03:22 | 1 | Niskin | 0.69 | 0.01644 | 971014013 |
| HAS2.05 | | | 03:22 | 25 | Niskin | 0.66 | 0.01872 | 971014012 |
| HAS2.05 | | | 03:22 | 50 | Niskin | 2.82 | 0.07738 | 971014011 |
| HAS2.05 | | | 03:22 | 75 | Niskin | 1.40 | 0.06508 | 971014010 |
| HAS2.05 | | | 03:41 | 80 | CABLE | 3.04 | 0.05149 | 971014014 |
| HAS2.05 | | | 03:52 | (0.35-0.50) | BOSS | 2.66 | 0.57334 | 971014016 |
| HAS2.05 | | | 03:52 | (0.05-0.25) | BOSS | 40.36 | 29.02735 | 971014015 |
| HAS2.05 | | | 03:00 | 80 | Slurp | 7.65 | 1.27747 | 971014009 |
| HAS2.06 | | | 05:22 | 1 | Niskin | 0.77 | 0.00485 | 971014021 |
| HAS2.06 | | | 05:22 | 25 | Niskin | 0.78 | 0.00899 | 971014020 |
| HAS2.06 | | | 05:22 | 50 | Niskin | 1.30 | 0.07844 | 971014019 |
| HAS2.06 | | | 05:22 | 75 | Niskin | 2.80 | 0.08199 | 971014018 |
| HAS2.06 | | | 05:35 | 80 | CABLE | 0.85 | 0.05367 | 971014022 |
| HAS2.06 | | | 06:01 | (0.35-0.50) | BOSS | 4.18 | 0.88947 | 971014024 |
| HAS2.06 | | | 06:01 | (0.05-0.25) | BOSS | 4.26 | 1.02802 | 971014023 |
| HAS2.06 | | | 05:07 | 82 | Slurp | 206.71 | 1.01805 | 971014017 |
| HAS2.07 | | | 07:25 | 1 | Niskin | 1.53 | 0.01527 | 971014029 |
| HAS2.07 | | | 07:25 | 25 | Niskin | 0.61 | 0.01056 | 971014028 |
| HAS2.07 | | | 07:25 | 50 | Niskin | 0.59 | 0.05178 | 971014027 |
| HAS2.07 | | | 07:25 | 75 | Niskin | 0.90 | 0.07632 | 971014026 |
| HAS2.07 | | | 07:37 | 80 | CABLE | 4.73 | 0.06610 | 971014030 |
| HAS2.07 | | | 07:49 | (0.35-0.50) | BOSS | 3.85 | 0.68566 | 971014032 |
| HAS2.07 | | | 07:49 | (0.05-0.25) | BOSS | 103.95 | 31.34246 | 971014031 |

Table 4 cont. Listing of sample information for anchor station HAS2.

| STN | Latitude | Longitude | TIME(GMT) | DEPTH(m) | SAMPLER | SPM g $m^{-3}$ | Inorg. PPM | ID NUMBER |
|---|---|---|---|---|---|---|---|---|
| HAS2.07 | 46° 43.75' N | 48° 47.47' W | 07:06 | 81 | Slurp | 129.38 | 1.38394 | 971014025 |
| HAS2.08 | | | 09:04 | 1 | Niskin | 1.16 | 0.01660 | 971014037 |
| HAS2.08 | | | 09:04 | 25 | Niskin | 0.71 | 0.00550 | 971014036 |
| HAS2.08 | | | 09:04 | 50 | Niskin | 0.56 | 0.06523 | 971014035 |
| HAS2.08 | | | 09:04 | 75 | Niskin | 1.13 | 0.08015 | 971014034 |
| HAS2.08 | | | 09:21 | 80 | CABLE | 0.72 | 0.05204 | 971014038 |
| HAS2.08 | | | 09:44 | (0.35-0.50) | BOSS | 2.27 | 0.69981 | 971014040 |
| HAS2.08 | | | 09:44 | (0.05-0.25) | BOSS | 7.74 | 0.71466 | 971014039 |
| HAS2.08 | | | 08:06 | 80 | Slurp | 292.53 | 1.05903 | 971014033 |
| HAS2.09 | | | 11:22 | 1 | Niskin | 0.70 | 0.00615 | 971014045 |
| HAS2.09 | | | 11:22 | 25 | Niskin | 0.72 | 0.19311 | 971014044 |
| HAS2.09 | | | 11:22 | 50 | Niskin | 1.65 | 1.45489 | 971014043 |
| HAS2.09 | | | 11:22 | 75 | Niskin | 2.10 | 0.06596 | 971014042 |
| HAS2.09 | | | 11:39 | 80 | CABLE | 0.70 | 0.00408 | 971014046 |
| HAS2.09 | | | 11:50 | (0.35-0.50) | BOSS | 3.41 | 0.13189 | 971014048 |
| HAS2.09 | | | 11:50 | (0.05-0.25) | BOSS | 795.89 | 0.16446 | 971014047 |
| HAS2.09 | | | 11:03 | 80 | Slurp | 293.36 | 9.03966 | 971014041 |
| HAS2.10 | | | 13:29 | 1 | Niskin | 0.49 | 0.01306 | 971014053 |
| HAS2.10 | | | 13:29 | 25 | Niskin | 0.45 | 0.00956 | 971014052 |
| HAS2.10 | | | 13:29 | 50 | Niskin | 0.28 | 0.05404 | 971014051 |
| HAS2.10 | | | 13:29 | 75 | Niskin | 0.80 | 0.10136 | 971014050 |
| HAS2.10 | | | 13:48 | 80 | CABLE | 2.35 | 0.08861 | 971014054 |
| HAS2.10 | | | 13:59 | (0.35-0.50) | BOSS | 3.67 | 0.88352 | 971014056 |
| HAS2.10 | | | 13:59 | (0.05-0.25) | BOSS | 31.33 | 0.96492 | 971014055 |
| HAS2.10 | | | 13:19 | 80 | Slurp | 12.31 | 0.41737 | 971014049 |
| HAS2.11 | | | 15:38 | 1 | Niskin | 0.42 | 0.01085 | 971014061 |
| HAS2.11 | | | 15:38 | 25 | Niskin | 0.32 | 0.00815 | 971014060 |
| HAS2.11 | | | 15:38 | 50 | Niskin | 0.85 | 0.09406 | 971014059 |
| HAS2.11 | | | 15:38 | 75 | Niskin | 0.85 | 0.07436 | 971014058 |
| HAS2.11 | | | 15:48 | 80 | CABLE | 1.32 | 0.04882 | 971014062 |
| HAS2.11 | | | 16:02 | (0.35-0.50) | BOSS | 4.18 | 0.62207 | 971014064 |
| HAS2.11 | | | 16:02 | (0.05-0.25) | BOSS | 167.97 | 85.72436 | 971014063 |
| HAS2.11 | | | 15:21 | 80 | Slurp | 4.13 | 0.58877 | 971014057 |
| HAS2.12 | | | 17:38 | 1 | Niskin | 0.65 | 0.00737 | 971014069 |
| HAS2.12 | | | 17:38 | 25 | Niskin | 0.76 | 0.00524 | 971014068 |
| HAS2.12 | | | 17:38 | 50 | Niskin | 1.67 | 0.08280 | 971014067 |
| HAS2.12 | | | 17:38 | 75 | Niskin | 1.06 | 0.06951 | 971014066 |
| HAS2.12 | | | 17:47 | 80 | CABLE | 1.57 | 0.05721 | 971014070 |
| HAS2.12 | | | 17:58 | (0.35-0.50) | BOSS | 2.38 | 0.66801 | 971014072 |
| HAS2.12 | | | 17:58 | (0.05-0.25) | BOSS | 3.27 | 0.90507 | 971014071 |
| HAS2.12 | | | 17:17 | 80 | Slurp | 2269.95 | 5.09256 | 971014065 |

Table 5. Inorganic size spectra, raw data: Station HN0.

| Station | HN0 | HN0 | HN0 | HN0 | HN0 | HN0 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 83 | 82 |
| Time GMT | 2249 | 2249 | 2249 | 2249 | 2259 | 2231 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 0.40 | 0.49 | 0.62 | 1.50 | 1.39 | 2.06 |
| Total PPM | 0.02033 | 0.01779 | 0.03561 | 0.07809 | 0.08598 | 100.00 |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00085 | 0.00080 | .. | 0.00296 | 0.00237 | 2.39 |
| 0.87 | 0.00087 | 0.00082 | 0.00080 | 0.00258 | 0.00225 | 2.48 |
| 1.00 | 0.00099 | 0.00093 | 0.00082 | 0.00263 | 0.00234 | 2.72 |
| 1.15 | 0.00102 | 0.00096 | 0.00087 | 0.00277 | 0.00254 | 2.88 |
| 1.32 | 0.00092 | 0.00088 | 0.00092 | 0.00288 | 0.00277 | 3.09 |
| 1.52 | 0.00093 | 0.00089 | 0.00100 | 0.00299 | 0.00288 | 3.15 |
| 1.74 | 0.00095 | 0.00092 | 0.00109 | 0.00313 | 0.00311 | 3.27 |
| 2.00 | 0.00094 | 0.00093 | 0.00112 | 0.00323 | 0.00328 | 3.29 |
| 2.30 | 0.00098 | 0.00099 | 0.00127 | 0.00341 | 0.00338 | 3.29 |
| 2.64 | 0.00107 | 0.00113 | 0.00139 | 0.00347 | 0.00340 | 3.40 |
| 3.03 | 0.00149 | 0.00152 | 0.00146 | 0.00338 | 0.00334 | 3.39 |
| 3.48 | 0.00100 | 0.00094 | 0.00124 | 0.00348 | 0.00319 | 3.40 |
| 4.00 | 0.00090 | 0.00093 | 0.00147 | 0.00356 | 0.00326 | 3.05 |
| 4.59 | 0.00081 | 0.00076 | 0.00154 | 0.00319 | 0.00317 | 3.08 |
| 5.28 | 0.00071 | 0.00065 | 0.00162 | 0.00299 | 0.00296 | 3.44 |
| 6.06 | 0.00069 | 0.00061 | 0.00190 | 0.00318 | 0.00317 | 3.75 |
| 6.96 | 0.00070 | 0.00062 | 0.00240 | 0.00378 | 0.00405 | 4.10 |
| 8.00 | 0.00064 | 0.00056 | 0.00271 | 0.00408 | 0.00458 | 4.42 |
| 9.19 | 0.00055 | 0.00045 | 0.00266 | 0.00362 | 0.00452 | 4.54 |
| 10.56 | 0.00042 | 0.00034 | 0.00232 | 0.00292 | 0.00369 | 4.62 |
| 12.13 | 0.00036 | 0.00024 | 0.00194 | 0.00215 | 0.00256 | 4.59 |
| 13.93 | 0.00031 | 0.00017 | 0.00151 | 0.00182 | 0.00198 | 4.48 |
| 16.00 | 0.00029 | 0.00015 | 0.00123 | 0.00174 | 0.00195 | 4.00 |
| 18.38 | 0.00035 | 0.00013 | 0.00075 | 0.00148 | 0.00162 | 3.15 |
| 21.11 | 0.00027 | 0.00011 | 0.00057 | 0.00159 | 0.00146 | 2.86 |
| 24.25 | 0.00031 | 0.00013 | 0.00027 | 0.00140 | 0.00151 | 2.70 |
| 27.86 | 0.00031 | 0.00009 | 0.00021 | 0.00108 | 0.00141 | 2.44 |
| 32.00 | 0.00027 | 0.00007 | 0.00017 | 0.00091 | 0.00152 | 1.88 |
| 36.76 | 0.00025 | 0.00004 | 0.00019 | 0.00080 | 0.00174 | 1.65 |
| 42.22 | 0.00016 | 0.00003 | 0.00017 | 0.00045 | 0.00162 | 0.97 |
| 48.50 | .. | .. | .. | 0.00028 | 0.00154 | 1.18 |
| 55.72 | .. | .. | .. | 0.00016 | 0.00187 | 1.91 |
| 64.00 | .. | .. | .. | .. | 0.00095 | 0.44 |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 6. Inorganic size spectra, raw data: Station HN1.

| Station | HN1 | HN1 | HN1 | HN1 | HN1 | HN1 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 83 | 83 |
| Time GMT | 19 | 19 | 19 | 19 | 30 | 2359 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 0.58 | 0.36 | 0.51 | 0.38 | 0.79 | 11.77 |
| Total PPM | 0.02549 | 0.01550 | 0.07685 | 0.05656 | 0.06275 | 100.00 |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00132 | 0.00070 | 0.00156 | 0.00128 | 0.00194 | 1.75 |
| 0.87 | 0.00116 | 0.00074 | 0.00142 | 0.00123 | 0.00181 | 1.88 |
| 1.00 | 0.00122 | 0.00084 | 0.00154 | 0.00132 | 0.00191 | 2.09 |
| 1.15 | 0.00124 | 0.00085 | 0.00169 | 0.00143 | 0.00205 | 2.29 |
| 1.32 | 0.00114 | 0.00076 | 0.00181 | 0.00153 | 0.00221 | 2.48 |
| 1.52 | 0.00114 | 0.00076 | 0.00194 | 0.00164 | 0.00241 | 2.70 |
| 1.74 | 0.00112 | 0.00081 | 0.00209 | 0.00173 | 0.00248 | 2.87 |
| 2.00 | 0.00109 | 0.00080 | 0.00218 | 0.00177 | 0.00264 | 3.01 |
| 2.30 | 0.00121 | 0.00086 | 0.00245 | 0.00188 | 0.00282 | 3.08 |
| 2.64 | 0.00122 | 0.00097 | 0.00287 | 0.00186 | 0.00283 | 3.28 |
| 3.03 | 0.00157 | 0.00125 | 0.00318 | 0.00181 | 0.00281 | 3.32 |
| 3.48 | 0.00118 | 0.00090 | 0.00385 | 0.00186 | 0.00251 | 3.16 |
| 4.00 | 0.00096 | 0.00072 | 0.00447 | 0.00203 | 0.00271 | 3.64 |
| 4.59 | 0.00104 | 0.00066 | 0.00445 | 0.00203 | 0.00279 | 3.32 |
| 5.28 | 0.00094 | 0.00056 | 0.00433 | 0.00209 | 0.00259 | 3.62 |
| 6.06 | 0.00094 | 0.00056 | 0.00454 | 0.00240 | 0.00271 | 3.92 |
| 6.96 | 0.00095 | 0.00056 | 0.00486 | 0.00336 | 0.00348 | 4.67 |
| 8.00 | 0.00090 | 0.00050 | 0.00537 | 0.00402 | 0.00402 | 4.98 |
| 9.19 | 0.00080 | 0.00040 | 0.00589 | 0.00429 | 0.00385 | 4.77 |
| 10.56 | 0.00072 | 0.00034 | 0.00542 | 0.00382 | 0.00304 | 4.71 |
| 12.13 | 0.00058 | 0.00024 | 0.00376 | 0.00298 | 0.00198 | 4.67 |
| 13.93 | 0.00047 | 0.00017 | 0.00242 | 0.00242 | 0.00148 | 4.58 |
| 16.00 | 0.00051 | 0.00014 | 0.00173 | 0.00199 | 0.00116 | 4.40 |
| 18.38 | 0.00039 | 0.00019 | 0.00123 | 0.00157 | 0.00107 | 4.06 |
| 21.11 | 0.00039 | 0.00011 | 0.00085 | 0.00139 | 0.00082 | 3.68 |
| 24.25 | 0.00041 | 0.00009 | 0.00047 | 0.00109 | 0.00077 | 3.42 |
| 27.86 | 0.00037 | .. | 0.00034 | 0.00086 | 0.00064 | 2.83 |
| 32.00 | 0.00030 | .. | 0.00014 | 0.00051 | 0.00059 | 2.30 |
| 36.76 | 0.00020 | .. | .. | 0.00022 | 0.00040 | 1.68 |
| 42.22 | .. | .. | .. | 0.00013 | 0.00023 | 1.20 |
| 48.50 | .. | .. | .. | .. | .. | 0.97 |
| 55.72 | .. | .. | .. | .. | .. | 0.66 |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 7. Inorganic size spectra, raw data: Station HN2.

| Station | HN2 | HN2 | HN2 | HN2 | HN2 | HN2 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 83 | 82 |
| Time GMT | 154 | 154 | 154 | 154 | 206 | 131 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 0.48 | 0.59 | 0.41 | 0.35 | 1.26 | 6.07 |
| Total PPM | 0.02377 | 0.01909 | 0.04266 | 0.05551 | 0.08210 | 100.00 |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00111 | 0.00091 | 0.00141 | 0.00181 | 0.00215 | 1.78 |
| 0.87 | 0.00104 | 0.00083 | 0.00127 | 0.00157 | 0.00217 | 1.98 |
| 1.00 | 0.00113 | 0.00087 | 0.00130 | 0.00159 | 0.00237 | 2.25 |
| 1.15 | 0.00116 | 0.00089 | 0.00137 | 0.00166 | 0.00257 | 2.48 |
| 1.32 | 0.00110 | 0.00085 | 0.00142 | 0.00179 | 0.00277 | 2.75 |
| 1.52 | 0.00109 | 0.00086 | 0.00153 | 0.00187 | 0.00295 | 2.99 |
| 1.74 | 0.00112 | 0.00090 | 0.00156 | 0.00200 | 0.00316 | 3.12 |
| 2.00 | 0.00114 | 0.00091 | 0.00166 | 0.00205 | 0.00329 | 3.22 |
| 2.30 | 0.00118 | 0.00093 | 0.00170 | 0.00215 | 0.00336 | 3.50 |
| 2.64 | 0.00120 | 0.00106 | 0.00176 | 0.00225 | 0.00345 | 3.39 |
| 3.03 | 0.00163 | 0.00137 | 0.00187 | 0.00229 | 0.00329 | 3.47 |
| 3.48 | 0.00114 | 0.00096 | 0.00189 | 0.00238 | 0.00333 | 3.34 |
| 4.00 | 0.00094 | 0.00085 | 0.00208 | 0.00243 | 0.00321 | 3.67 |
| 4.59 | 0.00086 | 0.00080 | 0.00201 | 0.00240 | 0.00284 | 3.64 |
| 5.28 | 0.00077 | 0.00075 | 0.00225 | 0.00269 | 0.00327 | 3.58 |
| 6.06 | 0.00077 | 0.00075 | 0.00232 | 0.00299 | 0.00331 | 3.82 |
| 6.96 | 0.00078 | 0.00075 | 0.00264 | 0.00383 | 0.00395 | 4.52 |
| 8.00 | 0.00074 | 0.00073 | 0.00290 | 0.00450 | 0.00466 | 4.59 |
| 9.19 | 0.00065 | 0.00061 | 0.00306 | 0.00432 | 0.00477 | 4.27 |
| 10.56 | 0.00057 | 0.00054 | 0.00238 | 0.00314 | 0.00377 | 3.96 |
| 12.13 | 0.00051 | 0.00046 | 0.00152 | 0.00195 | 0.00273 | 3.88 |
| 13.93 | 0.00047 | 0.00038 | 0.00083 | 0.00118 | 0.00223 | 3.88 |
| 16.00 | 0.00043 | 0.00032 | 0.00058 | 0.00089 | 0.00199 | 3.79 |
| 18.38 | 0.00036 | 0.00018 | 0.00043 | 0.00061 | 0.00193 | 3.76 |
| 21.11 | 0.00043 | 0.00023 | 0.00032 | 0.00031 | 0.00186 | 3.61 |
| 24.25 | 0.00039 | 0.00013 | 0.00026 | 0.00027 | 0.00132 | 3.11 |
| 27.86 | 0.00026 | 0.00015 | 0.00021 | 0.00031 | 0.00150 | 3.11 |
| 32.00 | 0.00056 | 0.00009 | 0.00015 | 0.00019 | 0.00161 | 2.92 |
| 36.76 | 0.00020 | .. | .. | 0.00007 | 0.00103 | 1.87 |
| 42.22 | .. | .. | .. | .. | .. | 1.49 |
| 48.50 | .. | .. | .. | .. | .. | 0.63 |
| 55.72 | .. | .. | .. | .. | .. | 1.05 |
| 64.00 | .. | .. | .. | .. | .. | 0.56 |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

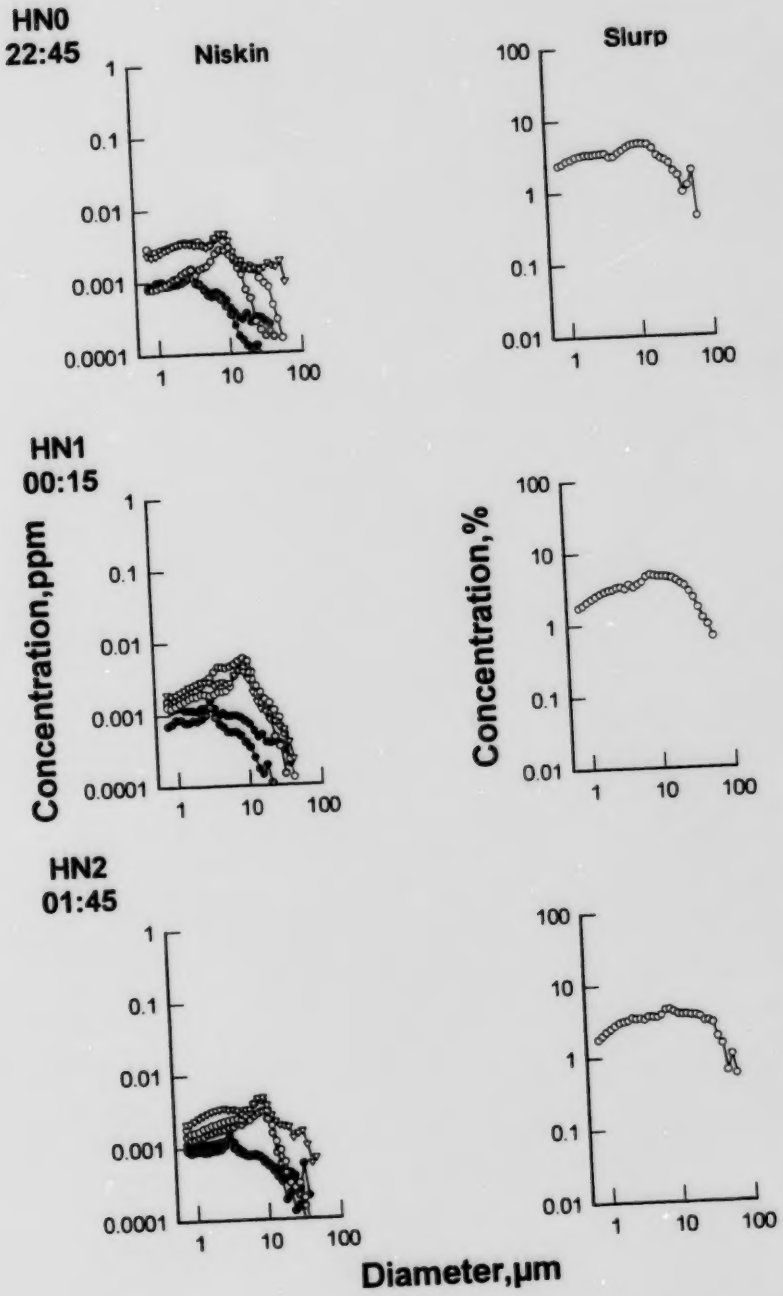


Figure 4. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles.

Table 8. Inorganic size spectra, raw data: Station HN3.

| Station | HN3 | HN3 | HN3 | HN3 | HN3 | HN3 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 81 | |
| Time GMT | 1312 | 1312 | 1312 | 1312 | 1327 | |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 0.65 | 0.39 | 1.01 | 0.30 | 0.99 | .. |
| Total PPM | 0.03051 | 0.02198 | 0.06176 | 0.04783 | 0.05685 | .. |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00116 | 0.00104 | 0.00153 | 0.00111 | 0.00157 | .. |
| 0.87 | 0.00114 | 0.00101 | 0.00134 | 0.00112 | 0.00145 | .. |
| 1.00 | 0.00126 | 0.00108 | 0.00143 | 0.00123 | 0.00156 | .. |
| 1.15 | 0.00132 | 0.00114 | 0.00153 | 0.00135 | 0.00166 | .. |
| 1.32 | 0.00123 | 0.00106 | 0.00166 | 0.00151 | 0.00179 | .. |
| 1.52 | 0.00124 | 0.00108 | 0.00174 | 0.00167 | 0.00193 | .. |
| 1.74 | 0.00126 | 0.00108 | 0.00191 | 0.00176 | 0.00206 | .. |
| 2.00 | 0.00124 | 0.00110 | 0.00199 | 0.00193 | 0.00221 | .. |
| 2.30 | 0.00130 | 0.00115 | 0.00213 | 0.00205 | 0.00234 | .. |
| 2.64 | 0.00153 | 0.00132 | 0.00232 | 0.00204 | 0.00252 | .. |
| 3.03 | 0.00208 | 0.00170 | 0.00245 | 0.00220 | 0.00248 | .. |
| 3.48 | 0.00167 | 0.00128 | 0.00235 | 0.00197 | 0.00266 | .. |
| 4.00 | 0.00131 | 0.00117 | 0.00290 | 0.00222 | 0.00262 | .. |
| 4.59 | 0.00125 | 0.00103 | 0.00299 | 0.00221 | 0.00265 | .. |
| 5.28 | 0.00110 | 0.00093 | 0.00296 | 0.00217 | 0.00241 | .. |
| 6.06 | 0.00114 | 0.00088 | 0.00322 | 0.00236 | 0.00263 | .. |
| 6.96 | 0.00116 | 0.00083 | 0.00375 | 0.00321 | 0.00348 | .. |
| 8.00 | 0.00118 | 0.00072 | 0.00411 | 0.00366 | 0.00407 | .. |
| 9.19 | 0.00109 | 0.00055 | 0.00432 | 0.00332 | 0.00423 | .. |
| 10.56 | 0.00091 | 0.00041 | 0.00367 | 0.00245 | 0.00336 | .. |
| 12.13 | 0.00074 | 0.00034 | 0.00257 | 0.00148 | 0.00204 | .. |
| 13.93 | 0.00060 | 0.00022 | 0.00166 | 0.00102 | 0.00143 | .. |
| 16.00 | 0.00061 | 0.00020 | 0.00138 | 0.00072 | 0.00090 | .. |
| 18.38 | 0.00055 | 0.00020 | 0.00115 | 0.00075 | 0.00083 | .. |
| 21.11 | 0.00053 | 0.00016 | 0.00137 | 0.00056 | 0.00056 | .. |
| 24.25 | 0.00046 | 0.00020 | 0.00133 | 0.00055 | 0.00039 | .. |
| 27.86 | 0.00054 | 0.00011 | 0.00111 | 0.00044 | 0.00050 | .. |
| 32.00 | 0.00044 | .. | 0.00059 | 0.00057 | 0.00029 | .. |
| 36.76 | 0.00033 | .. | 0.00031 | 0.00022 | 0.00022 | .. |
| 42.22 | 0.00014 | .. | .. | .. | .. | .. |
| 48.50 | .. | .. | .. | .. | .. | .. |
| 55.72 | .. | .. | .. | .. | .. | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 9. Inorganic size spectra, raw data: Station HN4.

| Station | HN4 | HN4 | HN4 | HN4 | HN4 | HN4 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 82 | |
| Time GMT | 1421 | 1421 | 1421 | 1421 | 1535 | |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 0.56 | 0.55 | 0.40 | 0.53 | 0.35 | .. |
| Total PPM | 0.02164 | 0.02136 | 0.07454 | 0.04276 | 0.03871 | .. |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00092 | 0.00114 | 0.00157 | 0.00107 | 0.00102 | .. |
| 0.87 | 0.00087 | 0.00096 | 0.00158 | 0.00112 | 0.00098 | .. |
| 1.00 | 0.00099 | 0.00101 | 0.00172 | 0.00123 | 0.00110 | .. |
| 1.15 | 0.00106 | 0.00107 | 0.00190 | 0.00136 | 0.00120 | .. |
| 1.32 | 0.00099 | 0.00102 | 0.00210 | 0.00148 | 0.00133 | .. |
| 1.52 | 0.00096 | 0.00101 | 0.00223 | 0.00164 | 0.00141 | .. |
| 1.74 | 0.00101 | 0.00102 | 0.00243 | 0.00172 | 0.00150 | .. |
| 2.00 | 0.00098 | 0.00104 | 0.00263 | 0.00187 | 0.00163 | .. |
| 2.30 | 0.00102 | 0.00112 | 0.00276 | 0.00197 | 0.00166 | .. |
| 2.64 | 0.00119 | 0.00130 | 0.00326 | 0.00195 | 0.00165 | .. |
| 3.03 | 0.00162 | 0.00151 | 0.00358 | 0.00204 | 0.00163 | .. |
| 3.48 | 0.00129 | 0.00128 | 0.00405 | 0.00183 | 0.00161 | .. |
| 4.00 | 0.00115 | 0.00120 | 0.00427 | 0.00212 | 0.00162 | .. |
| 4.59 | 0.00088 | 0.00106 | 0.00422 | 0.00201 | 0.00154 | .. |
| 5.28 | 0.00082 | 0.00090 | 0.00381 | 0.00201 | 0.00158 | .. |
| 6.06 | 0.00083 | 0.00084 | 0.00395 | 0.00222 | 0.00181 | .. |
| 6.96 | 0.00088 | 0.00079 | 0.00417 | 0.00290 | 0.00255 | .. |
| 8.00 | 0.00089 | 0.00068 | 0.00497 | 0.00329 | 0.00302 | .. |
| 9.19 | 0.00074 | 0.00055 | 0.00614 | 0.00307 | 0.00290 | .. |
| 10.56 | 0.00059 | 0.00040 | 0.00567 | 0.00208 | 0.00199 | .. |
| 12.13 | 0.00045 | 0.00029 | 0.00331 | 0.00112 | 0.00113 | .. |
| 13.93 | 0.00027 | 0.00023 | 0.00152 | 0.00079 | 0.00069 | .. |
| 16.00 | 0.00022 | 0.00017 | 0.00069 | 0.00056 | 0.00062 | .. |
| 18.38 | 0.00019 | 0.00018 | 0.00048 | 0.00041 | 0.00051 | .. |
| 21.11 | 0.00022 | 0.00012 | 0.00046 | 0.00032 | 0.00045 | .. |
| 24.25 | 0.00017 | 0.00016 | 0.00036 | 0.00032 | 0.00038 | .. |
| 27.86 | 0.00020 | 0.00016 | 0.00033 | 0.00017 | 0.00031 | .. |
| 32.00 | 0.00018 | 0.00013 | 0.00024 | 0.00008 | 0.00045 | .. |
| 36.76 | 0.00007 | .. | 0.00014 | .. | 0.00029 | .. |
| 42.22 | .. | .. | .. | .. | 0.00014 | .. |
| 48.50 | .. | .. | .. | .. | .. | .. |
| 55.72 | .. | .. | .. | .. | .. | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 10. Inorganic size spectra, raw data: Station HS0.

| Station | HS0 | HS0 | HS0 | HS0 | HS0 | HS0 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | 80 |
| Time GMT | 18 | 18 | 18 | 18 | 37 | 49 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 0.94 | 0.33 | 0.53 | 0.40 | 2.06 | 10.96 |
| Total PPM | 0.01452 | 0.03325 | 0.01038 | 0.04791 | 0.16671 | 100.00 |
| Diameter (µm) | | | | | | |
| 0.76 | .. | 0.00086 | .. | .. | 0.00406 | 2.50 |
| 0.87 | .. | 0.00084 | .. | 0.00129 | 0.00400 | 2.72 |
| 1.00 | .. | 0.00090 | .. | 0.00139 | 0.00425 | 3.06 |
| 1.15 | 0.00072 | 0.00098 | 0.00051 | 0.00152 | 0.00456 | 3.41 |
| 1.32 | 0.00075 | 0.00105 | 0.00052 | 0.00165 | 0.00498 | 3.60 |
| 1.52 | 0.00076 | 0.00111 | 0.00055 | 0.00175 | 0.00522 | 3.77 |
| 1.74 | 0.00078 | 0.00114 | 0.00053 | 0.00190 | 0.00557 | 3.95 |
| 2.00 | 0.00079 | 0.00126 | 0.00051 | 0.00202 | 0.00580 | 4.10 |
| 2.30 | 0.00077 | 0.00142 | 0.00054 | 0.00211 | 0.00591 | 4.12 |
| 2.64 | 0.00080 | 0.00147 | 0.00055 | 0.00219 | 0.00612 | 4.34 |
| 3.03 | 0.00073 | 0.00147 | 0.00052 | 0.00220 | 0.00600 | 4.15 |
| 3.48 | 0.00062 | 0.00167 | 0.00042 | 0.00220 | 0.00631 | 4.05 |
| 4.00 | 0.00067 | 0.00150 | 0.00045 | 0.00228 | 0.00612 | 4.10 |
| 4.59 | 0.00065 | 0.00127 | 0.00041 | 0.00208 | 0.00572 | 3.63 |
| 5.28 | 0.00063 | 0.00151 | 0.00044 | 0.00202 | 0.00572 | 3.76 |
| 6.06 | 0.00061 | 0.00166 | 0.00042 | 0.00245 | 0.00599 | 3.91 |
| 6.96 | 0.00057 | 0.00206 | 0.00040 | 0.00319 | 0.00785 | 4.80 |
| 8.00 | 0.00053 | 0.00264 | 0.00039 | 0.00382 | 0.00879 | 4.89 |
| 9.19 | 0.00047 | 0.00307 | 0.00040 | 0.00381 | 0.00809 | 4.09 |
| 10.56 | 0.00043 | 0.00230 | 0.00036 | 0.00259 | 0.00722 | 3.54 |
| 12.13 | 0.00035 | 0.00119 | 0.00033 | 0.00139 | 0.00663 | 3.13 |
| 13.93 | 0.00032 | 0.00059 | 0.00027 | 0.00094 | 0.00673 | 2.99 |
| 16.00 | 0.00033 | 0.00035 | 0.00028 | 0.00076 | 0.00681 | 2.75 |
| 18.38 | 0.00032 | 0.00028 | 0.00023 | 0.00064 | 0.00673 | 2.71 |
| 21.11 | 0.00036 | 0.00026 | 0.00024 | 0.00053 | 0.00583 | 2.81 |
| 24.25 | 0.00029 | 0.00025 | 0.00027 | 0.00044 | 0.00524 | 2.61 |
| 27.86 | 0.00034 | 0.00014 | 0.00027 | 0.00027 | 0.00394 | 1.92 |
| 32.00 | 0.00018 | .. | 0.00024 | 0.00030 | 0.00281 | 1.45 |
| 36.76 | 0.00021 | .. | 0.00019 | 0.00018 | 0.00175 | 1.49 |
| 42.22 | 0.00032 | .. | 0.00012 | .. | 0.00127 | 1.27 |
| 48.50 | 0.00022 | .. | .. | .. | 0.00069 | 0.40 |
| 55.72 | .. | .. | .. | .. | .. | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

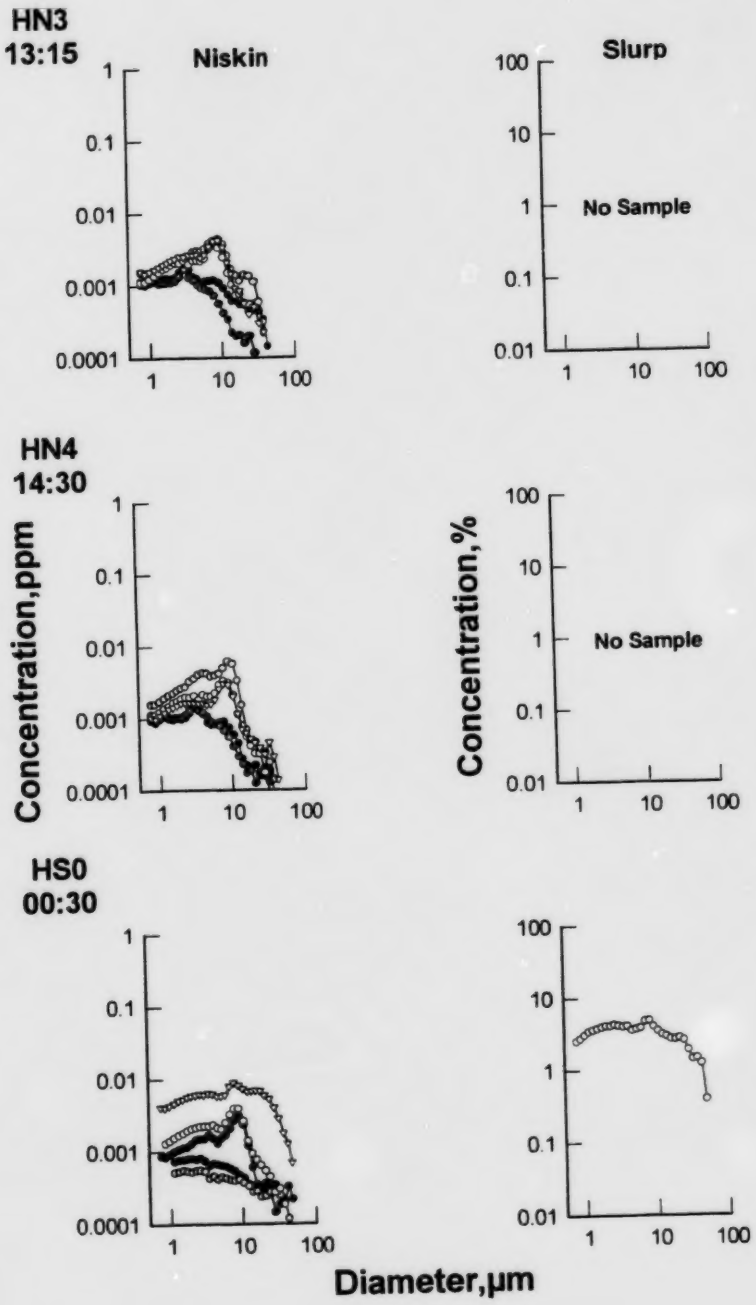


Figure 5. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles.

Table 11. Inorganic size spectra, raw data: Station HS1.

| Station | HS1 | HS1 | HS1 | HS1 | HS1 | HS1 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | 80 |
| Time GMT | 2259 | 2259 | 2259 | 2259 | 2317 | 2241 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 1.70 | 0.57 | 0.42 | 0.43 | 10.18 | 35.67 |
| Total PPM | 0.01332 | 0.01288 | 0.03447 | 0.05113 | 0.08795 | 100.00 |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00075 | 0.00138 | 0.00188 | 0.00168 | 0.00307 | 2.94 |
| 0.87 | 0.00068 | 0.00105 | 0.00160 | 0.00147 | 0.00286 | 3.14 |
| 1.00 | 0.00062 | 0.00079 | 0.00145 | 0.00150 | 0.00283 | 3.43 |
| 1.15 | 0.00061 | 0.00068 | 0.00142 | 0.00166 | 0.00292 | 3.69 |
| 1.32 | 0.00063 | 0.00065 | 0.00149 | 0.00181 | 0.00312 | 3.87 |
| 1.52 | 0.00066 | 0.00062 | 0.00152 | 0.00199 | 0.00332 | 4.02 |
| 1.74 | 0.00066 | 0.00061 | 0.00156 | 0.00218 | 0.00344 | 4.12 |
| 2.00 | 0.00066 | 0.00056 | 0.00156 | 0.00219 | 0.00357 | 4.25 |
| 2.30 | 0.00071 | 0.00049 | 0.00166 | 0.00242 | 0.00364 | 4.31 |
| 2.64 | 0.00069 | 0.00048 | 0.00168 | 0.00241 | 0.00371 | 4.39 |
| 3.03 | 0.00073 | 0.00050 | 0.00169 | 0.00266 | 0.00366 | 4.22 |
| 3.48 | 0.00067 | 0.00045 | 0.00137 | 0.00254 | 0.00366 | 4.36 |
| 4.00 | 0.00066 | 0.00042 | 0.00143 | 0.00277 | 0.00342 | 4.00 |
| 4.59 | 0.00063 | 0.00037 | 0.00143 | 0.00260 | 0.00343 | 3.97 |
| 5.28 | 0.00056 | 0.00035 | 0.00127 | 0.00262 | 0.00355 | 4.02 |
| 6.06 | 0.00050 | 0.00034 | 0.00129 | 0.00270 | 0.00368 | 4.23 |
| 6.96 | 0.00043 | 0.00035 | 0.00152 | 0.00338 | 0.00493 | 4.78 |
| 8.00 | 0.00039 | 0.00035 | 0.00183 | 0.00357 | 0.00548 | 4.81 |
| 9.19 | 0.00032 | 0.00029 | 0.00216 | 0.00281 | 0.00500 | 4.34 |
| 10.56 | 0.00026 | 0.00032 | 0.00163 | 0.00186 | 0.00392 | 3.93 |
| 12.13 | 0.00023 | 0.00027 | 0.00096 | 0.00115 | 0.00296 | 3.32 |
| 13.93 | 0.00019 | 0.00028 | 0.00051 | 0.00087 | 0.00249 | 2.97 |
| 16.00 | 0.00015 | 0.00026 | 0.00034 | 0.00060 | 0.00208 | 2.90 |
| 18.38 | 0.00015 | 0.00023 | 0.00030 | 0.00045 | 0.00211 | 2.37 |
| 21.11 | 0.00015 | 0.00022 | 0.00034 | 0.00033 | 0.00182 | 1.92 |
| 24.25 | 0.00017 | 0.00010 | 0.00029 | 0.00028 | 0.00124 | 1.75 |
| 27.86 | 0.00014 | 0.00022 | 0.00013 | 0.00024 | 0.00073 | 1.38 |
| 32.00 | 0.00016 | 0.00010 | 0.00016 | 0.00026 | 0.00074 | 1.21 |
| 36.76 | 0.00012 | 0.00011 | .. | 0.00015 | 0.00031 | 0.92 |
| 42.22 | .. | 0.00004 | .. | .. | 0.00026 | 0.44 |
| 48.50 | .. | .. | .. | .. | .. | .. |
| 55.72 | .. | .. | .. | .. | .. | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 12. Inorganic size spectra, raw data: Station HS2.

| Station | HS2 | HS2 | HS2 | HS2 | HS2 | HS2 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 79 | 80 |
| Time GMT | 2133 | 2133 | 2133 | 2133 | 2147 | 2115 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total spm | 4.09 | 0.54 | 0.38 | 0.57 | 8.51 | 757.73 |
| Total Volume | 0.01331 | 0.00827 | 0.02670 | 0.06491 | 0.12261 | 100.00 |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00066 | 0.00040 | .. | 0.00175 | 0.00274 | 2.18 |
| 0.87 | 0.00059 | 0.00040 | 0.00105 | 0.00179 | 0.00286 | 2.45 |
| 1.00 | 0.00051 | 0.00042 | 0.00099 | 0.00198 | 0.00311 | 2.78 |
| 1.15 | 0.00048 | 0.00045 | 0.00097 | 0.00219 | 0.00337 | 3.13 |
| 1.32 | 0.00049 | 0.00046 | 0.00101 | 0.00243 | 0.00369 | 3.43 |
| 1.52 | 0.00051 | 0.00047 | 0.00103 | 0.00262 | 0.00387 | 3.76 |
| 1.74 | 0.00049 | 0.00049 | 0.00108 | 0.00281 | 0.00412 | 3.97 |
| 2.00 | 0.00052 | 0.00049 | 0.00110 | 0.00292 | 0.00437 | 4.19 |
| 2.30 | 0.00049 | 0.00045 | 0.00115 | 0.00307 | 0.00456 | 4.23 |
| 2.64 | 0.00046 | 0.00045 | 0.00120 | 0.00319 | 0.00464 | 4.38 |
| 3.03 | 0.00050 | 0.00048 | 0.00117 | 0.00310 | 0.00467 | 4.36 |
| 3.48 | 0.00047 | 0.00038 | 0.00122 | 0.00288 | 0.00490 | 4.41 |
| 4.00 | 0.00040 | 0.00031 | 0.00111 | 0.00317 | 0.00497 | 4.69 |
| 4.59 | 0.00040 | 0.00029 | 0.00107 | 0.00270 | 0.00453 | 4.67 |
| 5.28 | 0.00038 | 0.00031 | 0.00111 | 0.00273 | 0.00487 | 4.35 |
| 6.06 | 0.00036 | 0.00027 | 0.00114 | 0.00290 | 0.00515 | 4.47 |
| 6.96 | 0.00039 | 0.00026 | 0.00137 | 0.00378 | 0.00612 | 5.16 |
| 8.00 | 0.00042 | 0.00024 | 0.00154 | 0.00429 | 0.00656 | 5.51 |
| 9.19 | 0.00043 | 0.00020 | 0.00176 | 0.00395 | 0.00586 | 4.88 |
| 10.56 | 0.00041 | 0.00015 | 0.00141 | 0.00292 | 0.00502 | 4.02 |
| 12.13 | 0.00044 | 0.00012 | 0.00087 | 0.00182 | 0.00410 | 3.47 |
| 13.93 | 0.00042 | 0.00011 | 0.00063 | 0.00123 | 0.00379 | 3.07 |
| 16.00 | 0.00048 | 0.00012 | 0.00048 | 0.00107 | 0.00368 | 2.65 |
| 18.38 | 0.00052 | 0.00012 | 0.00048 | 0.00091 | 0.00356 | 2.31 |
| 21.11 | 0.00047 | 0.00010 | 0.00045 | 0.00078 | 0.00359 | 1.82 |
| 24.25 | 0.00046 | 0.00006 | 0.00029 | 0.00055 | 0.00359 | 1.63 |
| 27.86 | 0.00030 | 0.00011 | 0.00044 | 0.00048 | 0.00336 | 1.22 |
| 32.00 | 0.00028 | 0.00010 | 0.00034 | 0.00053 | 0.00267 | 0.82 |
| 36.76 | 0.00026 | 0.00005 | 0.00024 | 0.00028 | 0.00172 | .. |
| 42.22 | 0.00012 | .. | .. | 0.00007 | 0.00193 | .. |
| 48.50 | 0.00017 | .. | .. | .. | 0.00062 | .. |
| 55.72 | .. | .. | .. | .. | .. | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 13. Inorganic size spectra, raw data: Station HS3.

| Station | HS3 | HS3 | HS3 | HS3 | HS3 | HS3 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | 82 |
| Time GMT | 2013 | 2013 | 2013 | 2013 | 2026 | 1958 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 0.82 | 0.75 | 0.76 | 0.81 | 0.69 | 205.43 |
| Total PPM | 0.01920 | 0.00984 | 0.05588 | 0.06988 | 0.05335 | 100.00 |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00085 | 0.00049 | 0.00116 | 0.00166 | 0.00132 | 1.88 |
| 0.87 | 0.00075 | 0.00044 | 0.00111 | 0.00158 | 0.00135 | 2.17 |
| 1.00 | 0.00075 | 0.00044 | 0.00113 | 0.00172 | 0.00147 | 2.50 |
| 1.15 | 0.00076 | 0.00044 | 0.00124 | 0.00186 | 0.00158 | 2.85 |
| 1.32 | 0.00075 | 0.00045 | 0.00135 | 0.00204 | 0.00172 | 3.31 |
| 1.52 | 0.00075 | 0.00043 | 0.00146 | 0.00223 | 0.00185 | 3.62 |
| 1.74 | 0.00082 | 0.00044 | 0.00158 | 0.00241 | 0.00198 | 3.95 |
| 2.00 | 0.00078 | 0.00043 | 0.00174 | 0.00264 | 0.00210 | 4.19 |
| 2.30 | 0.00082 | 0.00041 | 0.00211 | 0.00279 | 0.00214 | 4.33 |
| 2.64 | 0.00085 | 0.00039 | 0.00248 | 0.00293 | 0.00226 | 4.42 |
| 3.03 | 0.00077 | 0.00036 | 0.00264 | 0.00303 | 0.00235 | 4.38 |
| 3.48 | 0.00084 | 0.00032 | 0.00279 | 0.00292 | 0.00203 | 4.62 |
| 4.00 | 0.00084 | 0.00040 | 0.00255 | 0.00320 | 0.00234 | 4.79 |
| 4.59 | 0.00078 | 0.00032 | 0.00268 | 0.00311 | 0.00223 | 4.23 |
| 5.28 | 0.00073 | 0.00029 | 0.00262 | 0.00308 | 0.00212 | 4.29 |
| 6.06 | 0.00070 | 0.00030 | 0.00280 | 0.00355 | 0.00268 | 4.43 |
| 6.96 | 0.00065 | 0.00029 | 0.00328 | 0.00454 | 0.00346 | 6.25 |
| 8.00 | 0.00060 | 0.00032 | 0.00390 | 0.00522 | 0.00366 | 6.47 |
| 9.19 | 0.00055 | 0.00033 | 0.00474 | 0.00531 | 0.00319 | 4.93 |
| 10.56 | 0.00053 | 0.00032 | 0.00447 | 0.00419 | 0.00233 | 3.95 |
| 12.13 | 0.00046 | 0.00032 | 0.00282 | 0.00254 | 0.00164 | 3.24 |
| 13.93 | 0.00055 | 0.00030 | 0.00157 | 0.00155 | 0.00122 | 2.70 |
| 16.00 | 0.00051 | 0.00028 | 0.00096 | 0.00124 | 0.00104 | 2.32 |
| 18.38 | 0.00043 | 0.00031 | 0.00078 | 0.00094 | 0.00101 | 2.07 |
| 21.11 | 0.00049 | 0.00027 | 0.00069 | 0.00088 | 0.00085 | 1.76 |
| 24.25 | 0.00042 | 0.00022 | 0.00050 | 0.00086 | 0.00088 | 1.62 |
| 27.86 | 0.00052 | 0.00020 | 0.00035 | 0.00073 | 0.00073 | 0.88 |
| 32.00 | 0.00049 | 0.00017 | 0.00018 | 0.00036 | 0.00065 | 1.00 |
| 36.76 | 0.00032 | 0.00016 | 0.00022 | 0.00051 | 0.00060 | 0.92 |
| 42.22 | 0.00012 | .. | .. | 0.00026 | 0.00031 | 0.52 |
| 48.50 | .. | .. | .. | .. | 0.00024 | 0.86 |
| 55.72 | .. | .. | .. | .. | .. | 0.53 |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

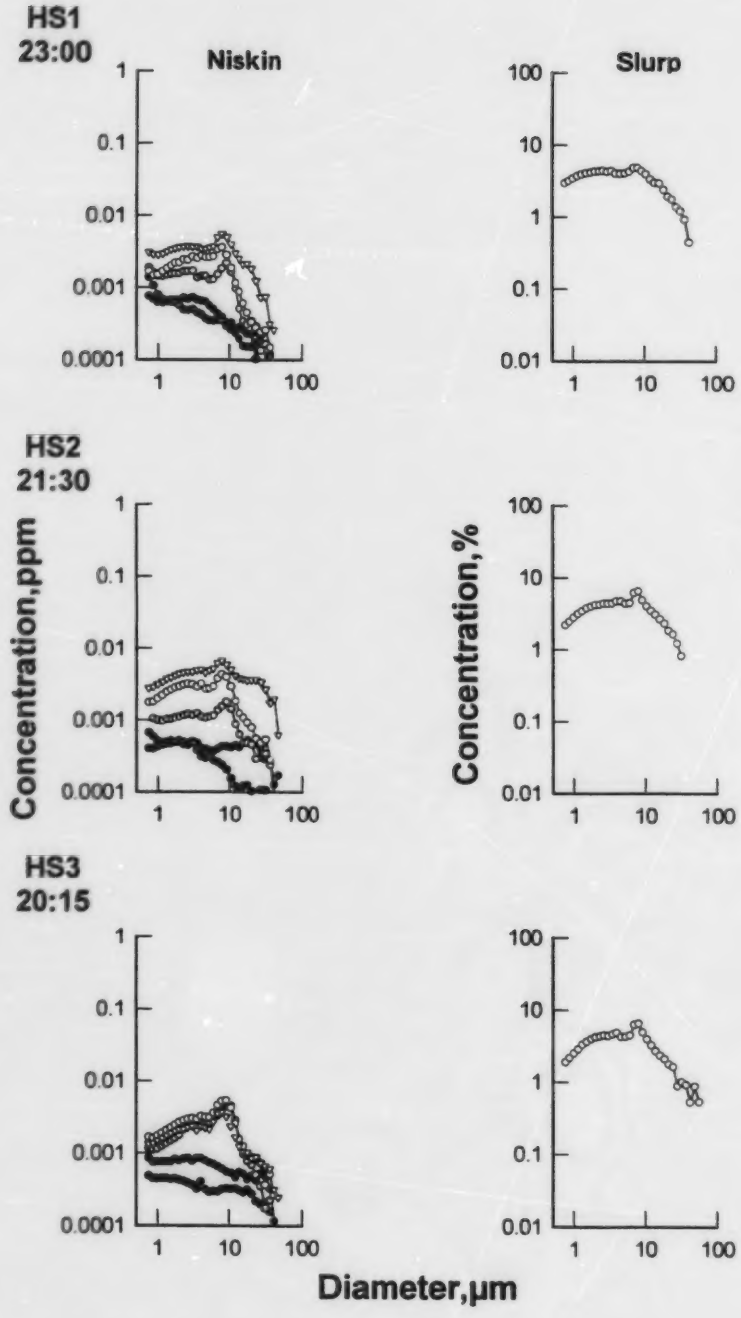


Figure 6. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles.

Table 14. Inorganic size spectra, raw data: Station HS4.

| Station | HS4 | HS4 | HS4 | HS4 | HS4 | HS4 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 74 | 79 | 78 |
| Time GMT | 1850 | 1850 | 1850 | 1850 | 1902 | 1832 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 0.79 | 0.74 | 0.78 | 1.12 | 2.32 | 4.62 |
| Total PPM | 0.01204 | 0.01077 | 0.06663 | 0.08586 | 0.11287 | 100.00 |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00069 | 0.00075 | 0.00145 | 0.00193 | 0.00228 | 1.94 |
| 0.87 | 0.00054 | 0.00064 | 0.00127 | 0.00181 | 0.00218 | 2.16 |
| 1.00 | 0.00052 | 0.00061 | 0.00136 | 0.00195 | 0.00235 | 2.43 |
| 1.15 | 0.00050 | 0.00056 | 0.00148 | 0.00214 | 0.00253 | 2.75 |
| 1.32 | 0.00053 | 0.00052 | 0.00164 | 0.00233 | 0.00275 | 3.03 |
| 1.52 | 0.00051 | 0.00050 | 0.00176 | 0.00252 | 0.00300 | 3.35 |
| 1.74 | 0.00052 | 0.00046 | 0.00192 | 0.00278 | 0.00322 | 3.62 |
| 2.00 | 0.00054 | 0.00046 | 0.00217 | 0.00299 | 0.00356 | 3.80 |
| 2.30 | 0.00051 | 0.00043 | 0.00273 | 0.00325 | 0.00381 | 4.08 |
| 2.64 | 0.00053 | 0.00040 | 0.00342 | 0.00363 | 0.00414 | 4.28 |
| 3.03 | 0.00053 | 0.00040 | 0.00371 | 0.00380 | 0.00443 | 4.18 |
| 3.48 | 0.00054 | 0.00034 | 0.00373 | 0.00332 | 0.00413 | 3.82 |
| 4.00 | 0.00044 | 0.00032 | 0.00361 | 0.00367 | 0.00457 | 4.40 |
| 4.59 | 0.00047 | 0.00028 | 0.00337 | 0.00389 | 0.00448 | 4.12 |
| 5.28 | 0.00041 | 0.00030 | 0.00306 | 0.00365 | 0.00439 | 4.49 |
| 6.06 | 0.00037 | 0.00031 | 0.00316 | 0.00415 | 0.00492 | 4.75 |
| 6.96 | 0.00035 | 0.00032 | 0.00348 | 0.00524 | 0.00626 | 6.11 |
| 8.00 | 0.00033 | 0.00034 | 0.00407 | 0.00679 | 0.00774 | 6.52 |
| 9.19 | 0.00031 | 0.00033 | 0.00498 | 0.00823 | 0.00941 | 5.74 |
| 10.56 | 0.00035 | 0.00032 | 0.00527 | 0.00685 | 0.00924 | 4.69 |
| 12.13 | 0.00032 | 0.00028 | 0.00376 | 0.00366 | 0.00624 | 3.46 |
| 13.93 | 0.00038 | 0.00028 | 0.00215 | 0.00183 | 0.00401 | 2.94 |
| 16.00 | 0.00041 | 0.00030 | 0.00114 | 0.00120 | 0.00291 | 2.65 |
| 18.38 | 0.00036 | 0.00024 | 0.00070 | 0.00092 | 0.00257 | 2.26 |
| 21.11 | 0.00043 | 0.00025 | 0.00052 | 0.00083 | 0.00257 | 1.91 |
| 24.25 | 0.00040 | 0.00021 | 0.00022 | 0.00057 | 0.00208 | 1.45 |
| 27.86 | 0.00022 | 0.00025 | 0.00021 | 0.00079 | 0.00145 | 1.22 |
| 32.00 | 0.00005 | 0.00021 | 0.00015 | 0.00063 | 0.00117 | 1.14 |
| 36.76 | .. | 0.00013 | 0.00015 | 0.00036 | 0.00048 | 1.05 |
| 42.22 | .. | 0.00004 | .. | 0.00014 | .. | 1.09 |
| 48.50 | .. | .. | .. | .. | .. | 0.57 |
| 55.72 | .. | .. | .. | .. | .. | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 15. Inorganic size spectra, raw data: Station HS5.

| Station | HS5 | HS5 | HS5 | HS5 | HS5 | HS5 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 70 | 79 | 79 |
| Time GMT | 1734 | 1734 | 1734 | 1734 | 1751 | 1719 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 0.63 | 0.68 | 0.83 | 1.08 | 1.02 | 15.62 |
| Total PPM | 0.01084 | 0.01435 | 0.15245 | 0.11088 | 0.02958 | 100.00 |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00058 | 0.00091 | 0.00252 | 0.00232 | 0.00053 | 2.58 |
| 0.87 | 0.00053 | 0.00075 | 0.00237 | 0.00217 | 0.00048 | 2.46 |
| 1.00 | 0.00056 | 0.00072 | 0.00259 | 0.00231 | 0.00052 | 2.77 |
| 1.15 | 0.00055 | 0.00072 | 0.00287 | 0.00254 | 0.00055 | 3.10 |
| 1.32 | 0.00054 | 0.00066 | 0.00317 | 0.00271 | 0.00059 | 3.44 |
| 1.52 | 0.00051 | 0.00063 | 0.00341 | 0.00295 | 0.00065 | 3.90 |
| 1.74 | 0.00051 | 0.00060 | 0.00360 | 0.00325 | 0.00065 | 4.11 |
| 2.00 | 0.00048 | 0.00061 | 0.00406 | 0.00349 | 0.00072 | 4.44 |
| 2.30 | 0.00051 | 0.00059 | 0.00487 | 0.00376 | 0.00073 | 4.63 |
| 2.64 | 0.00053 | 0.00059 | 0.00588 | 0.00391 | 0.00087 | 4.68 |
| 3.03 | 0.00052 | 0.00052 | 0.00680 | 0.00420 | 0.00086 | 4.70 |
| 3.48 | 0.00036 | 0.00043 | 0.00704 | 0.00415 | 0.00087 | 4.45 |
| 4.00 | 0.00031 | 0.00046 | 0.00705 | 0.00445 | 0.00096 | 4.58 |
| 4.59 | 0.00037 | 0.00045 | 0.00631 | 0.00442 | 0.00093 | 4.44 |
| 5.28 | 0.00031 | 0.00039 | 0.00565 | 0.00462 | 0.00104 | 4.04 |
| 6.06 | 0.00032 | 0.00038 | 0.00574 | 0.00542 | 0.00127 | 4.20 |
| 6.96 | 0.00032 | 0.00040 | 0.00678 | 0.00721 | 0.00173 | 5.87 |
| 8.00 | 0.00026 | 0.00038 | 0.00948 | 0.00969 | 0.00231 | 6.29 |
| 9.19 | 0.00025 | 0.00040 | 0.01456 | 0.01209 | 0.00313 | 4.67 |
| 10.56 | 0.00023 | 0.00037 | 0.01784 | 0.01047 | 0.00304 | 3.63 |
| 12.13 | 0.00022 | 0.00040 | 0.01398 | 0.00576 | 0.00187 | 2.78 |
| 13.93 | 0.00020 | 0.00038 | 0.00766 | 0.00272 | 0.00120 | 2.35 |
| 16.00 | 0.00016 | 0.00042 | 0.00320 | 0.00146 | 0.00079 | 1.97 |
| 18.38 | 0.00017 | 0.00044 | 0.00154 | 0.00114 | 0.00073 | 1.70 |
| 21.11 | 0.00021 | 0.00046 | 0.00088 | 0.00087 | 0.00064 | 1.61 |
| 24.25 | 0.00017 | 0.00036 | 0.00100 | 0.00053 | 0.00046 | 1.10 |
| 27.86 | 0.00018 | 0.00029 | 0.00070 | 0.00034 | 0.00051 | 1.20 |
| 32.00 | 0.00030 | 0.00030 | 0.00056 | 0.00039 | 0.00033 | 0.85 |
| 36.76 | 0.00027 | 0.00015 | 0.00034 | 0.00051 | 0.00047 | 0.45 |
| 42.22 | 0.00029 | 0.00011 | .. | 0.00078 | 0.00014 | 0.75 |
| 48.50 | 0.00011 | 0.00006 | .. | 0.00026 | .. | 0.98 |
| 55.72 | .. | .. | .. | .. | .. | 0.69 |
| 64.00 | .. | .. | .. | .. | .. | 0.58 |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 16. Inorganic size spectra, raw data: Station HS6.

| Station | HS6 | HS6 | HS6 | HS6 | HS6 | HS6 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 70 | 74 | |
| Time GMT | 1527 | 1527 | 1527 | 1527 | 1627 | |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 0.46 | 0.52 | 0.68 | 1.19 | 3.20 | .. |
| Total PPM | 0.00658 | 0.01110 | 0.09761 | 0.13413 | 0.21110 | .. |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00061 | 0.00067 | 0.00228 | 0.00234 | 0.00519 | .. |
| 0.87 | 0.00046 | 0.00053 | 0.00205 | 0.00231 | 0.00480 | .. |
| 1.00 | 0.00043 | 0.00053 | 0.00217 | 0.00252 | 0.00514 | .. |
| 1.15 | 0.00042 | 0.00054 | 0.00235 | 0.00271 | 0.00562 | .. |
| 1.32 | 0.00038 | 0.00052 | 0.00253 | 0.00292 | 0.00615 | .. |
| 1.52 | 0.00033 | 0.00052 | 0.00273 | 0.00318 | 0.00665 | .. |
| 1.74 | 0.00030 | 0.00053 | 0.00292 | 0.00345 | 0.00734 | .. |
| 2.00 | 0.00029 | 0.00054 | 0.00324 | 0.00374 | 0.00767 | .. |
| 2.30 | 0.00023 | 0.00057 | 0.00357 | 0.00397 | 0.00880 | .. |
| 2.64 | 0.00022 | 0.00052 | 0.00411 | 0.00446 | 0.00882 | .. |
| 3.03 | 0.00020 | 0.00052 | 0.00487 | 0.00494 | 0.00965 | .. |
| 3.48 | 0.00011 | 0.00043 | 0.00436 | 0.00455 | 0.00891 | .. |
| 4.00 | 0.00010 | 0.00040 | 0.00489 | 0.00536 | 0.00971 | .. |
| 4.59 | 0.00014 | 0.00032 | 0.00482 | 0.00608 | 0.00917 | .. |
| 5.28 | 0.00014 | 0.00031 | 0.00423 | 0.00574 | 0.00882 | .. |
| 6.06 | 0.00014 | 0.00029 | 0.00428 | 0.00653 | 0.00971 | .. |
| 6.96 | 0.00013 | 0.00028 | 0.00497 | 0.00838 | 0.01083 | .. |
| 8.00 | 0.00014 | 0.00026 | 0.00663 | 0.01156 | 0.01223 | .. |
| 9.19 | 0.00014 | 0.00027 | 0.00953 | 0.01460 | 0.01559 | .. |
| 10.56 | 0.00013 | 0.00028 | 0.00950 | 0.01379 | 0.01490 | .. |
| 12.13 | 0.00012 | 0.00025 | 0.00579 | 0.00831 | 0.00975 | .. |
| 13.93 | 0.00013 | 0.00019 | 0.00258 | 0.00439 | 0.00527 | .. |
| 16.00 | 0.00013 | 0.00026 | 0.00110 | 0.00252 | 0.00350 | .. |
| 18.38 | 0.00013 | 0.00023 | 0.00063 | 0.00170 | 0.00314 | .. |
| 21.11 | 0.00015 | 0.00020 | 0.00056 | 0.00158 | 0.00277 | .. |
| 24.25 | 0.00010 | 0.00021 | 0.00044 | 0.00103 | 0.00244 | .. |
| 27.86 | 0.00014 | 0.00025 | 0.00032 | 0.00093 | 0.00264 | .. |
| 32.00 | 0.00018 | 0.00022 | 0.00015 | 0.00055 | 0.00178 | .. |
| 36.76 | 0.00020 | 0.00009 | .. | .. | 0.00165 | .. |
| 42.22 | 0.00017 | 0.00017 | .. | .. | 0.00098 | .. |
| 48.50 | 0.00009 | 0.00010 | .. | .. | 0.00093 | .. |
| 55.72 | .. | 0.00009 | .. | .. | 0.00055 | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

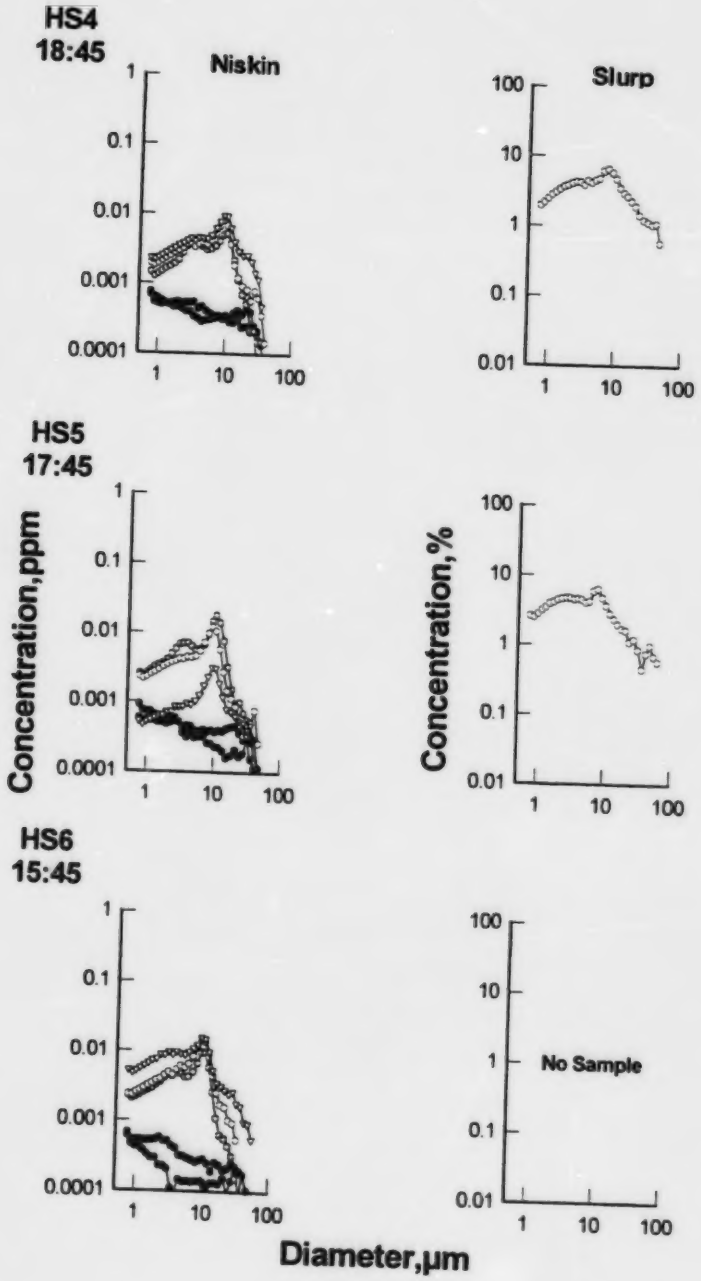


Figure 7. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles.

Table 17. Inorganic size spectra, raw data: Station HE0.

| Station | HE0 | HE0 | HE0 | HE0 | HE0 | HE0 |
|---|---|---|---|---|---|---|
| Depth(m) | | | | | 81 | |
| Time GMT | | | | | 2037 | |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | .. | .. | .. | .. | 0.59 | .. |
| Total PPM | .. | .. | .. | .. | 0.12068 | .. |
| Diameter (µm) | | | | | | |
| 0.76 | .. | .. | .. | .. | 0.00212 | .. |
| 0.87 | .. | .. | .. | .. | 0.00207 | .. |
| 1.00 | .. | .. | .. | .. | 0.00231 | .. |
| 1.15 | .. | .. | .. | .. | 0.00258 | .. |
| 1.32 | .. | .. | .. | .. | 0.00294 | .. |
| 1.52 | .. | .. | .. | .. | 0.00324 | .. |
| 1.74 | .. | .. | .. | .. | 0.00353 | .. |
| 2.00 | .. | .. | .. | .. | 0.00375 | .. |
| 2.30 | .. | .. | .. | .. | 0.00410 | .. |
| 2.64 | .. | .. | .. | .. | 0.00443 | .. |
| 3.03 | .. | .. | .. | .. | 0.00466 | .. |
| 3.48 | .. | .. | .. | .. | 0.00497 | .. |
| 4.00 | .. | .. | .. | .. | 0.00503 | .. |
| 4.59 | .. | .. | .. | .. | 0.00498 | .. |
| 5.28 | .. | .. | .. | .. | 0.00531 | .. |
| 6.06 | .. | .. | .. | .. | 0.00586 | .. |
| 6.96 | .. | .. | .. | .. | 0.00732 | .. |
| 8.00 | .. | .. | .. | .. | 0.00951 | .. |
| 9.19 | .. | .. | .. | .. | 0.01128 | .. |
| 10.56 | .. | .. | .. | .. | 0.01016 | .. |
| 12.13 | .. | .. | .. | .. | 0.00637 | .. |
| 13.93 | .. | .. | .. | .. | 0.00380 | .. |
| 16.00 | .. | .. | .. | .. | 0.00275 | .. |
| 18.38 | .. | .. | .. | .. | 0.00194 | .. |
| 21.11 | .. | .. | .. | .. | 0.00175 | .. |
| 24.25 | .. | .. | .. | .. | 0.00128 | .. |
| 27.86 | .. | .. | .. | .. | 0.00082 | .. |
| 32.00 | .. | .. | .. | .. | 0.00087 | .. |
| 36.76 | .. | .. | .. | .. | 0.00054 | .. |
| 42.22 | .. | .. | .. | .. | 0.00032 | .. |
| 48.50 | .. | .. | .. | .. | 0.00011 | .. |
| 55.72 | .. | .. | .. | .. | .. | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 18. Inorganic size spectra, raw data: Station HE1.

| Station | HE1 | HE1 | HE1 | HE1 | HE1 | HE1 |
|---|---|---|---|---|---|---|
| Depth(m) | | | | | 81 | |
| Time GMT | | | | | 2020 | |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | .. | .. | .. | .. | 1.04 | .. |
| Total PPM | .. | .. | .. | .. | 0.12095 | .. |
| Diameter (µm) | | | | | | |
| 0.76 | .. | .. | .. | .. | .. | .. |
| 0.87 | .. | .. | .. | .. | 0.00227 | .. |
| 1.00 | .. | .. | .. | .. | 0.00246 | .. |
| 1.15 | .. | .. | .. | .. | 0.00275 | .. |
| 1.32 | .. | .. | .. | .. | 0.00301 | .. |
| 1.52 | .. | .. | .. | .. | 0.00335 | .. |
| 1.74 | .. | .. | .. | .. | 0.00366 | .. |
| 2.00 | .. | .. | .. | .. | 0.00393 | .. |
| 2.30 | .. | .. | .. | .. | 0.00419 | .. |
| 2.64 | .. | .. | .. | .. | 0.00439 | .. |
| 3.03 | .. | .. | .. | .. | 0.00467 | .. |
| 3.48 | .. | .. | .. | .. | 0.00484 | .. |
| 4.00 | .. | .. | .. | .. | 0.00491 | .. |
| 4.59 | .. | .. | .. | .. | 0.00443 | .. |
| 5.28 | .. | .. | .. | .. | 0.00472 | .. |
| 6.06 | .. | .. | .. | .. | 0.00509 | .. |
| 6.96 | .. | .. | .. | .. | 0.00649 | .. |
| 8.00 | .. | .. | .. | .. | 0.00839 | .. |
| 9.19 | .. | .. | .. | .. | 0.01043 | .. |
| 10.56 | .. | .. | .. | .. | 0.00946 | .. |
| 12.13 | .. | .. | .. | .. | 0.00626 | .. |
| 13.93 | .. | .. | .. | .. | 0.00410 | .. |
| 16.00 | .. | .. | .. | .. | 0.00344 | .. |
| 18.38 | .. | .. | .. | .. | 0.00303 | .. |
| 21.11 | .. | .. | .. | .. | 0.00254 | .. |
| 24.25 | .. | .. | .. | .. | 0.00221 | .. |
| 27.86 | .. | .. | .. | .. | 0.00182 | .. |
| 32.00 | .. | .. | .. | .. | 0.00138 | .. |
| 36.76 | .. | .. | .. | .. | 0.00111 | .. |
| 42.22 | .. | .. | .. | .. | 0.00077 | .. |
| 48.50 | .. | .. | .. | .. | 0.00047 | .. |
| 55.72 | .. | .. | .. | .. | 0.00041 | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 19. Inorganic size spectra, raw data: Station HE2.

| Station | HE2 | HE2 | HE2 | HE2 | HE2 | HE2 |
|---|---|---|---|---|---|---|
| Depth(m) | | | | | 85 | |
| Time GMT | | | | | 1956 | |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | .. | .. | .. | .. | 1.33 | .. |
| Total PPM | .. | .. | .. | .. | 0.12751 | .. |
| Diameter (µm) | | | | | | |
| 0.76 | .. | .. | .. | .. | 0.00243 | .. |
| 0.87 | .. | .. | .. | .. | 0.00224 | .. |
| 1.00 | .. | .. | .. | .. | 0.00241 | .. |
| 1.15 | .. | .. | .. | .. | 0.00263 | .. |
| 1.32 | .. | .. | .. | .. | 0.00291 | .. |
| 1.52 | .. | .. | .. | .. | 0.00320 | .. |
| 1.74 | .. | .. | .. | .. | 0.00345 | .. |
| 2.00 | .. | .. | .. | .. | 0.00374 | .. |
| 2.30 | .. | .. | .. | .. | 0.00396 | .. |
| 2.64 | .. | .. | .. | .. | 0.00427 | .. |
| 3.03 | .. | .. | .. | .. | 0.00458 | .. |
| 3.48 | .. | .. | .. | .. | 0.00407 | .. |
| 4.00 | .. | .. | .. | .. | 0.00472 | .. |
| 4.59 | .. | .. | .. | .. | 0.00525 | .. |
| 5.28 | .. | .. | .. | .. | 0.00497 | .. |
| 6.06 | .. | .. | .. | .. | 0.00545 | .. |
| 6.96 | .. | .. | .. | .. | 0.00683 | .. |
| 8.00 | .. | .. | .. | .. | 0.00844 | .. |
| 9.19 | .. | .. | .. | .. | 0.01006 | .. |
| 10.56 | .. | .. | .. | .. | 0.00944 | .. |
| 12.13 | .. | .. | .. | .. | 0.00638 | .. |
| 13.93 | .. | .. | .. | .. | 0.00437 | .. |
| 16.00 | .. | .. | .. | .. | 0.00331 | .. |
| 18.38 | .. | .. | .. | .. | 0.00285 | .. |
| 21.11 | .. | .. | .. | .. | 0.00270 | .. |
| 24.25 | .. | .. | .. | .. | 0.00266 | .. |
| 27.86 | .. | .. | .. | .. | 0.00204 | .. |
| 32.00 | .. | .. | .. | .. | 0.00186 | .. |
| 36.76 | .. | .. | .. | .. | 0.00200 | .. |
| 42.22 | .. | .. | .. | .. | 0.00171 | .. |
| 48.50 | .. | .. | .. | .. | 0.00115 | .. |
| 55.72 | .. | .. | .. | .. | 0.00088 | .. |
| 64.00 | .. | .. | .. | .. | 0.00053 | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

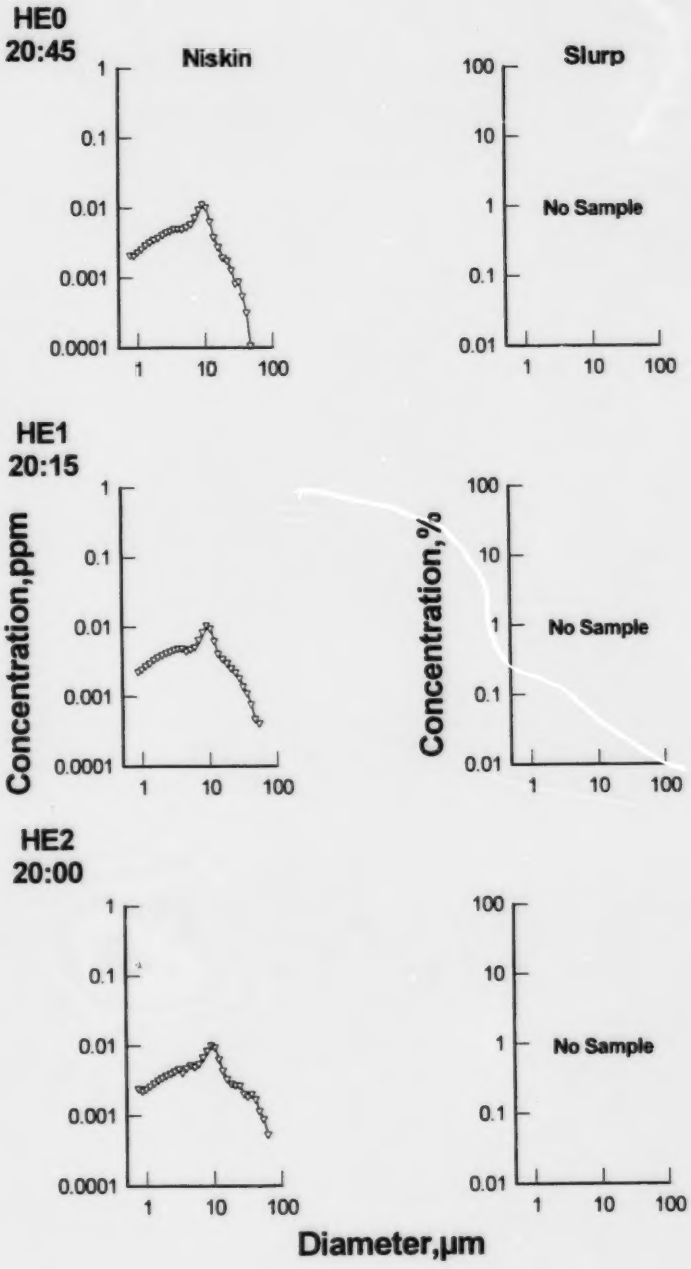


Figure 8. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles.

Table 20. Inorganic size spectra, raw data: Station HE3.

| Station | HE3 | HE3 | HE3 | HE3 | HE3 | HE3 |
|---|---|---|---|---|---|---|
| Depth(m) | | | | | 84 | |
| Time GMT | | | | | 1935 | |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | .. | .. | .. | .. | 1.02 | .. |
| Total PPM | .. | .. | .. | .. | 0.13019 | .. |
| Diameter (µm) | | | | | | |
| 0.76 | .. | .. | .. | .. | 0.00248 | .. |
| 0.87 | .. | .. | .. | .. | 0.00248 | .. |
| 1.00 | .. | .. | .. | .. | 0.00272 | .. |
| 1.15 | .. | .. | .. | .. | 0.00303 | .. |
| 1.32 | .. | .. | .. | .. | 0.00338 | .. |
| 1.52 | .. | .. | .. | .. | 0.00379 | .. |
| 1.74 | .. | .. | .. | .. | 0.00403 | .. |
| 2.00 | .. | .. | .. | .. | 0.00442 | .. |
| 2.30 | .. | .. | .. | .. | 0.00472 | .. |
| 2.64 | .. | .. | .. | .. | 0.00496 | .. |
| 3.03 | .. | .. | .. | .. | 0.00512 | .. |
| 3.48 | .. | .. | .. | .. | 0.00535 | .. |
| 4.00 | .. | .. | .. | .. | 0.00569 | .. |
| 4.59 | .. | .. | .. | .. | 0.00517 | .. |
| 5.28 | .. | .. | .. | .. | 0.00496 | .. |
| 6.06 | .. | .. | .. | .. | 0.00539 | .. |
| 6.96 | .. | .. | .. | .. | 0.00662 | .. |
| 8.00 | .. | .. | .. | .. | 0.00826 | .. |
| 9.19 | .. | .. | .. | .. | 0.00954 | .. |
| 10.56 | .. | .. | .. | .. | 0.00864 | .. |
| 12.13 | .. | .. | .. | .. | 0.00581 | .. |
| 13.93 | .. | .. | .. | .. | 0.00425 | .. |
| 16.00 | .. | .. | .. | .. | 0.00361 | .. |
| 18.38 | .. | .. | .. | .. | 0.00317 | .. |
| 21.11 | .. | .. | .. | .. | 0.00307 | .. |
| 24.25 | .. | .. | .. | .. | 0.00253 | .. |
| 27.86 | .. | .. | .. | .. | 0.00186 | .. |
| 32.00 | .. | .. | .. | .. | 0.00204 | .. |
| 36.76 | .. | .. | .. | .. | 0.00127 | .. |
| 42.22 | .. | .. | .. | .. | 0.00113 | .. |
| 48.50 | .. | .. | .. | .. | 0.00041 | .. |
| 55.72 | .. | .. | .. | .. | 0.00033 | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 21. Inorganic size spectra, raw data: Station HE4.

| Station | HE4 | HE4 | HE4 | HE4 | HE4 | HE4 |
|---|---|---|---|---|---|---|
| Depth(m) | | | | | 84 | |
| Time GMT | | | | | 1904 | |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | .. | .. | .. | .. | 1.04 | .. |
| Total PPM | .. | .. | .. | .. | 0.11377 | .. |
| Diameter (µm) | | | | | | |
| 0.76 | .. | .. | .. | .. | 0.00243 | .. |
| 0.87 | .. | .. | .. | .. | 0.00238 | .. |
| 1.00 | .. | .. | .. | .. | 0.00258 | .. |
| 1.15 | .. | .. | .. | .. | 0.00282 | .. |
| 1.32 | .. | .. | .. | .. | 0.00302 | .. |
| 1.52 | .. | .. | .. | .. | 0.00329 | .. |
| 1.74 | .. | .. | .. | .. | 0.00356 | .. |
| 2.00 | .. | .. | .. | .. | 0.00381 | .. |
| 2.30 | .. | .. | .. | .. | 0.00409 | .. |
| 2.64 | .. | .. | .. | .. | 0.00434 | .. |
| 3.03 | .. | .. | .. | .. | 0.00455 | .. |
| 3.48 | .. | .. | .. | .. | 0.00414 | .. |
| 4.00 | .. | .. | .. | .. | 0.00477 | .. |
| 4.59 | .. | .. | .. | .. | 0.00518 | .. |
| 5.28 | .. | .. | .. | .. | 0.00493 | .. |
| 6.06 | .. | .. | .. | .. | 0.00539 | .. |
| 6.96 | .. | .. | .. | .. | 0.00664 | .. |
| 8.00 | .. | .. | .. | .. | 0.00795 | .. |
| 9.19 | .. | .. | .. | .. | 0.00887 | .. |
| 10.56 | .. | .. | .. | .. | 0.00755 | .. |
| 12.13 | .. | .. | .. | .. | 0.00492 | .. |
| 13.93 | .. | .. | .. | .. | 0.00342 | .. |
| 16.00 | .. | .. | .. | .. | 0.00262 | .. |
| 18.38 | .. | .. | .. | .. | 0.00236 | .. |
| 21.11 | .. | .. | .. | .. | 0.00198 | .. |
| 24.25 | .. | .. | .. | .. | 0.00179 | .. |
| 27.86 | .. | .. | .. | .. | 0.00143 | .. |
| 32.00 | .. | .. | .. | .. | 0.00132 | .. |
| 36.76 | .. | .. | .. | .. | 0.00078 | .. |
| 42.22 | .. | .. | .. | .. | 0.00055 | .. |
| 48.50 | .. | .. | .. | .. | 0.00028 | .. |
| 55.72 | .. | .. | .. | .. | .. | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 22. Inorganic size spectra, raw data: Station HE5.

| Station | HE5 | HE5 | HE5 | HE5 | HE5 | HE5 |
|---|---|---|---|---|---|---|
| Depth(m) | | | | | 92.5 | |
| Time GMT | | | | | 1825 | |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | .. | .. | .. | .. | 1.19 | .. |
| Total PPM | .. | .. | .. | .. | 0.14456 | .. |
| Diameter (µm) | | | | | | |
| 0.76 | .. | .. | .. | .. | 0.00264 | .. |
| 0.87 | .. | .. | .. | .. | 0.00261 | .. |
| 1.00 | .. | .. | .. | .. | 0.00284 | .. |
| 1.15 | .. | .. | .. | .. | 0.00314 | .. |
| 1.32 | .. | .. | .. | .. | 0.00345 | .. |
| 1.52 | .. | .. | .. | .. | 0.00372 | .. |
| 1.74 | .. | .. | .. | .. | 0.00401 | .. |
| 2.00 | .. | .. | .. | .. | 0.00441 | .. |
| 2.30 | .. | .. | .. | .. | 0.00468 | .. |
| 2.64 | .. | .. | .. | .. | 0.00492 | .. |
| 3.03 | .. | .. | .. | .. | 0.00509 | .. |
| 3.48 | .. | .. | .. | .. | 0.00509 | .. |
| 4.00 | .. | .. | .. | .. | 0.00523 | .. |
| 4.59 | .. | .. | .. | .. | 0.00540 | .. |
| 5.28 | .. | .. | .. | .. | 0.00613 | .. |
| 6.06 | .. | .. | .. | .. | 0.00664 | .. |
| 6.96 | .. | .. | .. | .. | 0.00833 | .. |
| 8.00 | .. | .. | .. | .. | 0.00984 | .. |
| 9.19 | .. | .. | .. | .. | 0.01101 | .. |
| 10.56 | .. | .. | .. | .. | 0.01041 | .. |
| 12.13 | .. | .. | .. | .. | 0.00841 | .. |
| 13.93 | .. | .. | .. | .. | 0.00735 | .. |
| 16.00 | .. | .. | .. | .. | 0.00576 | .. |
| 18.38 | .. | .. | .. | .. | 0.00437 | .. |
| 21.11 | .. | .. | .. | .. | 0.00272 | .. |
| 24.25 | .. | .. | .. | .. | 0.00197 | .. |
| 27.86 | .. | .. | .. | .. | 0.00163 | .. |
| 32.00 | .. | .. | .. | .. | 0.00083 | .. |
| 36.76 | .. | .. | .. | .. | 0.00100 | .. |
| 42.22 | .. | .. | .. | .. | 0.00064 | .. |
| 48.50 | .. | .. | .. | .. | 0.00031 | .. |
| 55.72 | .. | .. | .. | .. | .. | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

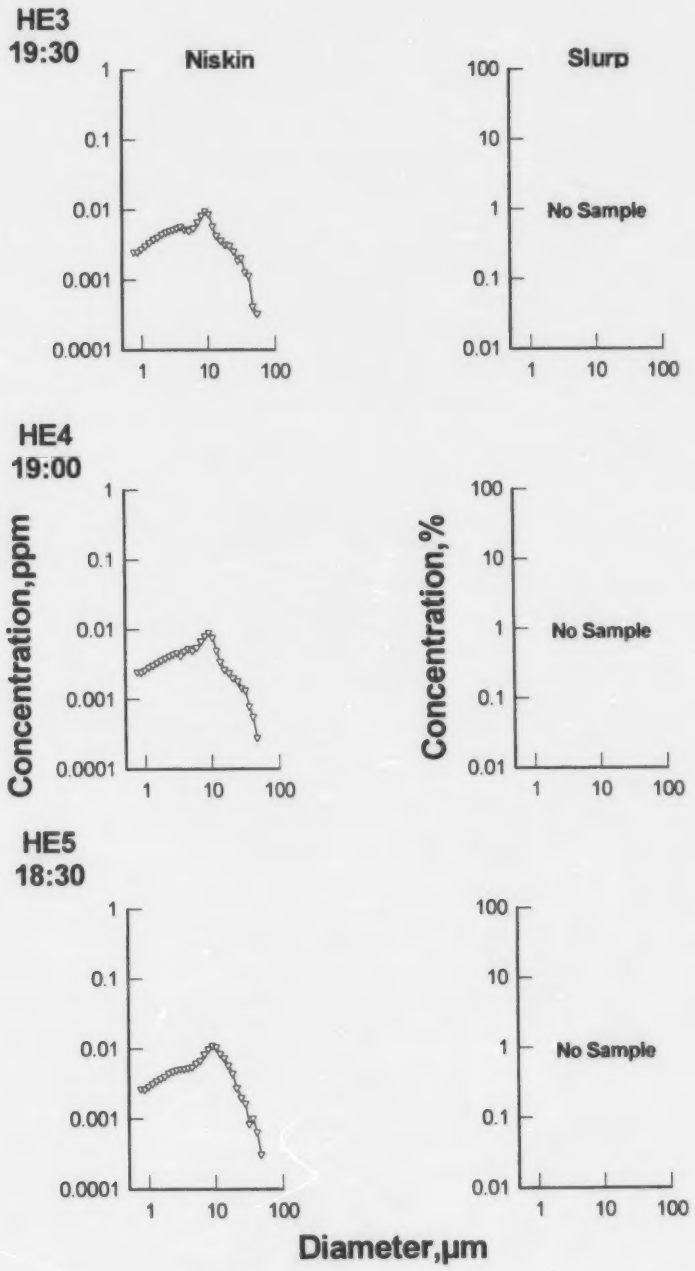


Figure 9. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles.

Table 23. Inorganic size spectra, raw data: Station HE6.

| Station | HE6 | HE6 | HE6 | HE6 | HE6 | HE6 |
|---|---|---|---|---|---|---|
| Depth(m) | | | | | 101 | |
| Time GMT | | | | | 1658 | |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | .. | .. | .. | .. | 0.70 | .. |
| Total PPM | .. | .. | .. | .. | 0.15937 | .. |
| Diameter (µm) | | | | | | |
| 0.76 | .. | .. | .. | .. | 0.00279 | .. |
| 0.87 | .. | .. | .. | .. | 0.00279 | .. |
| 1.00 | .. | .. | .. | .. | 0.00315 | .. |
| 1.15 | .. | .. | .. | .. | 0.00354 | .. |
| 1.32 | .. | .. | .. | .. | 0.00402 | .. |
| 1.52 | .. | .. | .. | .. | 0.00454 | .. |
| 1.74 | .. | .. | .. | .. | 0.00501 | .. |
| 2.00 | .. | .. | .. | .. | 0.00555 | .. |
| 2.30 | .. | .. | .. | .. | 0.00603 | .. |
| 2.64 | .. | .. | .. | .. | 0.00654 | .. |
| 3.03 | .. | .. | .. | .. | 0.00701 | .. |
| 3.48 | .. | .. | .. | .. | 0.00675 | .. |
| 4.00 | .. | .. | .. | .. | 0.00750 | .. |
| 4.59 | .. | .. | .. | .. | 0.00780 | .. |
| 5.28 | .. | .. | .. | .. | 0.00733 | .. |
| 6.06 | .. | .. | .. | .. | 0.00776 | .. |
| 6.96 | .. | .. | .. | .. | 0.00930 | .. |
| 8.00 | .. | .. | .. | .. | 0.01155 | .. |
| 9.19 | .. | .. | .. | .. | 0.01340 | .. |
| 10.56 | .. | .. | .. | .. | 0.01143 | .. |
| 12.13 | .. | .. | .. | .. | 0.00715 | .. |
| 13.93 | .. | .. | .. | .. | 0.00478 | .. |
| 16.00 | .. | .. | .. | .. | 0.00330 | .. |
| 18.38 | .. | .. | .. | .. | 0.00258 | .. |
| 21.11 | .. | .. | .. | .. | 0.00221 | .. |
| 24.25 | .. | .. | .. | .. | 0.00189 | .. |
| 27.86 | .. | .. | .. | .. | 0.00140 | .. |
| 32.00 | .. | .. | .. | .. | 0.00077 | .. |
| 36.76 | .. | .. | .. | .. | 0.00065 | .. |
| 42.22 | .. | .. | .. | .. | 0.00055 | .. |
| 48.50 | .. | .. | .. | .. | 0.00031 | .. |
| 55.72 | .. | .. | .. | .. | .. | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 24. Inorganic size spectra, raw data: Station HW0.

| Station | HW0 | HW0 | HW0 | HW0 | HW0 | HW0 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 82 | 82 |
| Time GMT | 1753 | 1753 | 1753 | 1753 | 1809 | 1734 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 1.34 | 0.92 | 1.16 | 0.97 | 0.76 | 46.41 |
| Total PPM | 0.01224 | 0.00929 | 0.08883 | 0.08660 | 0.06926 | 100.00 |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00059 | 0.00051 | 0.00131 | 0.00152 | 0.00171 | 1.10 |
| 0.87 | 0.00049 | 0.00044 | 0.00134 | 0.00159 | 0.00184 | 1.15 |
| 1.00 | 0.00043 | 0.00041 | 0.00146 | 0.00175 | 0.00210 | 1.29 |
| 1.15 | 0.00038 | 0.00038 | 0.00160 | 0.00194 | 0.00235 | 1.45 |
| 1.32 | 0.00035 | 0.00035 | 0.00172 | 0.00214 | 0.00252 | 1.62 |
| 1.52 | 0.00030 | 0.00034 | 0.00195 | 0.00235 | 0.00270 | 1.82 |
| 1.74 | 0.00032 | 0.00030 | 0.00214 | 0.00256 | 0.00289 | 1.96 |
| 2.00 | 0.00028 | 0.00029 | 0.00237 | 0.00269 | 0.00301 | 2.06 |
| 2.30 | 0.00027 | 0.00027 | 0.00258 | 0.00299 | 0.00305 | 2.23 |
| 2.64 | 0.00027 | 0.00029 | 0.00287 | 0.00313 | 0.00308 | 2.46 |
| 3.03 | 0.00026 | 0.00028 | 0.00312 | 0.00332 | 0.00332 | 2.45 |
| 3.48 | 0.00028 | 0.00027 | 0.00330 | 0.00319 | 0.00330 | 2.63 |
| 4.00 | 0.00026 | 0.00032 | 0.00363 | 0.00391 | 0.00314 | 2.71 |
| 4.59 | 0.00023 | 0.00022 | 0.00359 | 0.00408 | 0.00295 | 3.13 |
| 5.28 | 0.00027 | 0.00025 | 0.00364 | 0.00393 | 0.00275 | 3.16 |
| 6.06 | 0.00030 | 0.00026 | 0.00399 | 0.00418 | 0.00301 | 3.47 |
| 6.96 | 0.00037 | 0.00027 | 0.00455 | 0.00506 | 0.00383 | 4.16 |
| 8.00 | 0.00043 | 0.00028 | 0.00486 | 0.00563 | 0.00411 | 4.76 |
| 9.19 | 0.00050 | 0.00030 | 0.00493 | 0.00557 | 0.00371 | 4.74 |
| 10.56 | 0.00055 | 0.00032 | 0.00465 | 0.00483 | 0.00289 | 5.00 |
| 12.13 | 0.00060 | 0.00035 | 0.00407 | 0.00341 | 0.00189 | 5.26 |
| 13.93 | 0.00065 | 0.00035 | 0.00390 | 0.00256 | 0.00158 | 5.26 |
| 16.00 | 0.00074 | 0.00034 | 0.00383 | 0.00252 | 0.00146 | 5.51 |
| 18.38 | 0.00076 | 0.00036 | 0.00365 | 0.00241 | 0.00143 | 5.48 |
| 21.11 | 0.00070 | 0.00041 | 0.00315 | 0.00233 | 0.00115 | 5.11 |
| 24.25 | 0.00065 | 0.00032 | 0.00341 | 0.00217 | 0.00112 | 4.67 |
| 27.86 | 0.00052 | 0.00030 | 0.00248 | 0.00200 | 0.00078 | 4.37 |
| 32.00 | 0.00038 | 0.00031 | 0.00184 | 0.00132 | 0.00103 | 3.54 |
| 36.76 | 0.00011 | 0.00021 | 0.00104 | 0.00104 | 0.00054 | 2.62 |
| 42.22 | .. | .. | 0.00075 | 0.00049 | .. | 1.90 |
| 48.50 | .. | .. | 0.00068 | .. | .. | 1.06 |
| 55.72 | .. | .. | 0.00040 | .. | .. | 1.16 |
| 64.00 | .. | .. | .. | .. | .. | 0.74 |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 25. Inorganic size spectra, raw data: Station HW1.

| Station | HW1 | HW1 | HW1 | HW1 | HW1 | HW1 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 81 | |
| Time GMT | 1624 | 1624 | 1624 | 1624 | 1639 | |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 0.70 | 0.92 | 0.48 | 0.40 | 0.76 | .. |
| Total PPM | 0.01265 | 0.00937 | 0.04298 | 0.04640 | 0.07118 | .. |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00050 | 0.00036 | 0.00079 | 0.00092 | 0.00130 | .. |
| 0.87 | 0.00051 | 0.00034 | 0.00084 | 0.00103 | 0.00140 | .. |
| 1.00 | 0.00053 | 0.00034 | 0.00090 | 0.00119 | 0.00157 | .. |
| 1.15 | 0.00053 | 0.00033 | 0.00099 | 0.00134 | 0.00176 | .. |
| 1.32 | 0.00053 | 0.00030 | 0.00108 | 0.00149 | 0.00193 | .. |
| 1.52 | 0.00053 | 0.00030 | 0.00112 | 0.00166 | 0.00207 | .. |
| 1.74 | 0.00050 | 0.00028 | 0.00123 | 0.00178 | 0.00219 | .. |
| 2.00 | 0.00047 | 0.00029 | 0.00130 | 0.00193 | 0.00236 | .. |
| 2.30 | 0.00047 | 0.00027 | 0.00141 | 0.00201 | 0.00244 | .. |
| 2.64 | 0.00037 | 0.00028 | 0.00151 | 0.00210 | 0.00248 | .. |
| 3.03 | 0.00040 | 0.00026 | 0.00157 | 0.00213 | 0.00254 | .. |
| 3.48 | 0.00042 | 0.00025 | 0.00144 | 0.00212 | 0.00246 | .. |
| 4.00 | 0.00037 | 0.00017 | 0.00150 | 0.00221 | 0.00259 | .. |
| 4.59 | 0.00037 | 0.00018 | 0.00152 | 0.00194 | 0.00237 | .. |
| 5.28 | 0.00035 | 0.00021 | 0.00204 | 0.00190 | 0.00227 | .. |
| 6.06 | 0.00035 | 0.00023 | 0.00251 | 0.00196 | 0.00310 | .. |
| 6.96 | 0.00037 | 0.00026 | 0.00329 | 0.00281 | 0.00427 | .. |
| 8.00 | 0.00039 | 0.00030 | 0.00443 | 0.00355 | 0.00486 | .. |
| 9.19 | 0.00041 | 0.00033 | 0.00520 | 0.00393 | 0.00492 | .. |
| 10.56 | 0.00041 | 0.00037 | 0.00372 | 0.00292 | 0.00408 | .. |
| 12.13 | 0.00042 | 0.00045 | 0.00178 | 0.00155 | 0.00288 | .. |
| 13.93 | 0.00042 | 0.00048 | 0.00091 | 0.00102 | 0.00232 | .. |
| 16.00 | 0.00038 | 0.00063 | 0.00059 | 0.00072 | 0.00226 | .. |
| 18.38 | 0.00040 | 0.00067 | 0.00052 | 0.00059 | 0.00227 | .. |
| 21.11 | 0.00042 | 0.00066 | 0.00033 | 0.00050 | 0.00198 | .. |
| 24.25 | 0.00037 | 0.00043 | 0.00027 | 0.00034 | 0.00166 | .. |
| 27.86 | 0.00042 | 0.00021 | 0.00018 | 0.00026 | 0.00167 | .. |
| 32.00 | 0.00035 | 0.00017 | .. | 0.00028 | 0.00111 | .. |
| 36.76 | 0.00036 | .. | .. | 0.00021 | 0.00082 | .. |
| 42.22 | 0.00019 | .. | .. | .. | 0.00068 | .. |
| 48.50 | 0.00015 | .. | .. | .. | 0.00060 | .. |
| 55.72 | .. | .. | .. | .. | .. | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

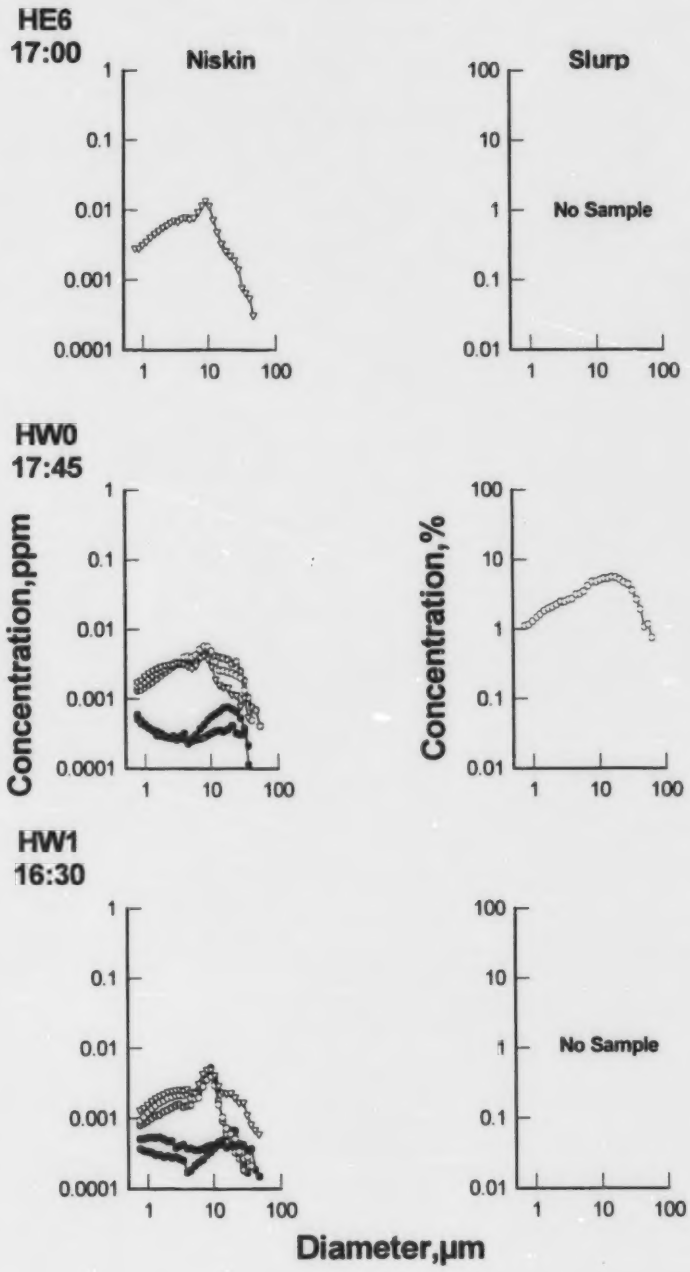


Figure 10. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles.

Table 26. Inorganic size spectra, raw data: Station HW2.

| Station | HW2 | HW2 | HW2 | HW2 | HW2 | HW2 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 81 | 80 |
| Time GMT | 1408 | 1408 | 1408 | 1408 | 1423 | 1356 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 0.66 | 0.55 | 0.32 | 0.68 | 0.91 | 16.58 |
| Total PPM | 0.01197 | 0.01136 | 0.06509 | 0.06870 | 0.07876 | 100.00 |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00046 | 0.00035 | 0.00076 | 0.00134 | 0.00165 | 1.88 |
| 0.87 | 0.00046 | 0.00037 | 0.00083 | 0.00149 | 0.00182 | 2.12 |
| 1.00 | 0.00047 | 0.00039 | 0.00095 | 0.00170 | 0.00209 | 2.42 |
| 1.15 | 0.00050 | 0.00040 | 0.00103 | 0.00191 | 0.00235 | 2.76 |
| 1.32 | 0.00049 | 0.00039 | 0.00113 | 0.00208 | 0.00254 | 3.03 |
| 1.52 | 0.00050 | 0.00038 | 0.00122 | 0.00224 | 0.00274 | 3.30 |
| 1.74 | 0.00049 | 0.00038 | 0.00137 | 0.00241 | 0.00292 | 3.52 |
| 2.00 | 0.00047 | 0.00038 | 0.00151 | 0.00251 | 0.00314 | 3.70 |
| 2.30 | 0.00049 | 0.00036 | 0.00169 | 0.00273 | 0.00315 | 3.83 |
| 2.64 | 0.00042 | 0.00036 | 0.00194 | 0.00283 | 0.00325 | 3.81 |
| 3.03 | 0.00041 | 0.00032 | 0.00200 | 0.00287 | 0.00341 | 3.93 |
| 3.48 | 0.00042 | 0.00031 | 0.00201 | 0.00260 | 0.00339 | 3.60 |
| 4.00 | 0.00042 | 0.00031 | 0.00197 | 0.00296 | 0.00337 | 4.15 |
| 4.59 | 0.00045 | 0.00034 | 0.00166 | 0.00314 | 0.00323 | 3.92 |
| 5.28 | 0.00032 | 0.00033 | 0.00179 | 0.00290 | 0.00300 | 3.88 |
| 6.06 | 0.00038 | 0.00034 | 0.00244 | 0.00303 | 0.00326 | 4.03 |
| 6.96 | 0.00036 | 0.00036 | 0.00347 | 0.00391 | 0.00424 | 5.08 |
| 8.00 | 0.00036 | 0.00035 | 0.00597 | 0.00496 | 0.00544 | 5.43 |
| 9.19 | 0.00035 | 0.00040 | 0.01025 | 0.00607 | 0.00641 | 4.75 |
| 10.56 | 0.00032 | 0.00040 | 0.01015 | 0.00552 | 0.00505 | 4.27 |
| 12.13 | 0.00035 | 0.00041 | 0.00544 | 0.00318 | 0.00291 | 3.92 |
| 13.93 | 0.00031 | 0.00044 | 0.00210 | 0.00167 | 0.00196 | 3.75 |
| 16.00 | 0.00033 | 0.00046 | 0.00084 | 0.00097 | 0.00151 | 3.60 |
| 18.38 | 0.00033 | 0.00043 | 0.00068 | 0.00084 | 0.00136 | 3.28 |
| 21.11 | 0.00031 | 0.00046 | 0.00047 | 0.00082 | 0.00123 | 2.75 |
| 24.25 | 0.00033 | 0.00040 | 0.00052 | 0.00063 | 0.00091 | 2.46 |
| 27.86 | 0.00039 | 0.00044 | 0.00041 | 0.00041 | 0.00072 | 2.03 |
| 32.00 | 0.00018 | 0.00037 | 0.00027 | 0.00046 | 0.00054 | 1.73 |
| 36.76 | 0.00030 | 0.00026 | 0.00023 | 0.00028 | 0.00048 | 1.37 |
| 42.22 | 0.00043 | 0.00025 | .. | 0.00025 | 0.00044 | 0.93 |
| 48.50 | 0.00015 | 0.00022 | .. | .. | 0.00024 | 0.55 |
| 55.72 | .. | .. | .. | .. | .. | 0.20 |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 27. Inorganic size spectra, raw data: Station HW3.

| Station | HW3 | HW3 | HW3 | HW3 | HW3 | HW3 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | 80 |
| Time GMT | 1254 | 1254 | 1254 | 1254 | 1309 | 1243 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 0.62 | 0.49 | 0.44 | 1.17 | 0.61 | 3.36 |
| Total PPM | 0.01218 | 0.00421 | 0.05541 | 0.07836 | 0.07433 | 100.00 |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00061 | 0.00024 | 0.00079 | 0.00115 | 0.00108 | 1.84 |
| 0.87 | 0.00062 | 0.00025 | 0.00086 | 0.00127 | 0.00122 | 2.00 |
| 1.00 | 0.00064 | 0.00026 | 0.00096 | 0.00143 | 0.00139 | 2.21 |
| 1.15 | 0.00065 | 0.00026 | 0.00109 | 0.00159 | 0.00156 | 2.40 |
| 1.32 | 0.00064 | 0.00023 | 0.00119 | 0.00178 | 0.00174 | 2.55 |
| 1.52 | 0.00059 | 0.00020 | 0.00127 | 0.00195 | 0.00194 | 2.67 |
| 1.74 | 0.00059 | 0.00018 | 0.00137 | 0.00213 | 0.00206 | 2.83 |
| 2.00 | 0.00060 | 0.00018 | 0.00152 | 0.00228 | 0.00223 | 2.92 |
| 2.30 | 0.00054 | 0.00018 | 0.00179 | 0.00257 | 0.00241 | 3.03 |
| 2.64 | 0.00052 | 0.00015 | 0.00214 | 0.00286 | 0.00263 | 3.10 |
| 3.03 | 0.00044 | 0.00013 | 0.00247 | 0.00294 | 0.00269 | 3.36 |
| 3.48 | 0.00039 | 0.00012 | 0.00234 | 0.00324 | 0.00234 | 3.43 |
| 4.00 | 0.00032 | 0.00015 | 0.00229 | 0.00304 | 0.00259 | 3.31 |
| 4.59 | 0.00036 | 0.00010 | 0.00217 | 0.00288 | 0.00226 | 3.31 |
| 5.28 | 0.00033 | 0.00011 | 0.00222 | 0.00302 | 0.00273 | 3.66 |
| 6.06 | 0.00032 | 0.00012 | 0.00238 | 0.00333 | 0.00303 | 3.99 |
| 6.96 | 0.00032 | 0.00013 | 0.00298 | 0.00440 | 0.00410 | 4.68 |
| 8.00 | 0.00034 | 0.00012 | 0.00424 | 0.00649 | 0.00619 | 5.20 |
| 9.19 | 0.00036 | 0.00014 | 0.00622 | 0.00927 | 0.00893 | 5.50 |
| 10.56 | 0.00031 | 0.00012 | 0.00631 | 0.00924 | 0.00868 | 5.36 |
| 12.13 | 0.00031 | 0.00011 | 0.00396 | 0.00509 | 0.00462 | 4.93 |
| 13.93 | 0.00029 | 0.00011 | 0.00175 | 0.00235 | 0.00221 | 4.87 |
| 16.00 | 0.00040 | 0.00009 | 0.00076 | 0.00113 | 0.00123 | 4.81 |
| 18.38 | 0.00031 | 0.00011 | 0.00039 | 0.00087 | 0.00109 | 4.23 |
| 21.11 | 0.00026 | 0.00008 | 0.00031 | 0.00064 | 0.00093 | 3.63 |
| 24.25 | 0.00030 | 0.00011 | 0.00033 | 0.00062 | 0.00070 | 2.94 |
| 27.86 | 0.00037 | 0.00017 | 0.00023 | 0.00047 | 0.00055 | 2.42 |
| 32.00 | 0.00033 | 0.00004 | 0.00032 | 0.00028 | 0.00047 | 1.90 |
| 36.76 | 0.00014 | 0.00003 | 0.00021 | 0.00007 | 0.00044 | 1.09 |
| 42.22 | .. | .. | 0.00039 | .. | 0.00028 | 1.01 |
| 48.50 | .. | .. | 0.00015 | .. | .. | 0.83 |
| 55.72 | .. | .. | .. | .. | .. | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 28. Inorganic size spectra, raw data: Station HW4.

| Station | HW4 | HW4 | HW4 | HW4 | HW4 | HW4 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 81 | 81 |
| Time GMT | 1146 | 1146 | 1146 | 1146 | 1159 | 1131 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 0.86 | 0.70 | 0.98 | 1.10 | 0.91 | 3.47 |
| Total PPM | 0.01379 | 0.00813 | 0.02941 | 0.08997 | 0.09274 | 100.00 |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00059 | 0.00037 | 0.00076 | 0.00123 | 0.00152 | 2.69 |
| 0.87 | 0.00059 | 0.00036 | 0.00079 | 0.00133 | 0.00167 | 2.96 |
| 1.00 | 0.00060 | 0.00037 | 0.00083 | 0.00150 | 0.00172 | 3.27 |
| 1.15 | 0.00059 | 0.00038 | 0.00088 | 0.00168 | 0.00176 | 3.52 |
| 1.32 | 0.00059 | 0.00038 | 0.00091 | 0.00189 | 0.00195 | 3.71 |
| 1.52 | 0.00057 | 0.00038 | 0.00097 | 0.00208 | 0.00216 | 3.71 |
| 1.74 | 0.00058 | 0.00039 | 0.00101 | 0.00227 | 0.00230 | 3.74 |
| 2.00 | 0.00056 | 0.00035 | 0.00110 | 0.00247 | 0.00249 | 3.95 |
| 2.30 | 0.00055 | 0.00034 | 0.00134 | 0.00272 | 0.00276 | 3.84 |
| 2.64 | 0.00050 | 0.00031 | 0.00149 | 0.00302 | 0.00302 | 3.99 |
| 3.03 | 0.00054 | 0.00028 | 0.00167 | 0.00337 | 0.00314 | 3.93 |
| 3.48 | 0.00046 | 0.00029 | 0.00147 | 0.00311 | 0.00321 | 3.98 |
| 4.00 | 0.00040 | 0.00027 | 0.00144 | 0.00364 | 0.00302 | 4.00 |
| 4.59 | 0.00041 | 0.00023 | 0.00147 | 0.00329 | 0.00282 | 3.97 |
| 5.28 | 0.00038 | 0.00023 | 0.00136 | 0.00328 | 0.00335 | 3.99 |
| 6.06 | 0.00037 | 0.00025 | 0.00142 | 0.00370 | 0.00415 | 4.17 |
| 6.96 | 0.00037 | 0.00026 | 0.00154 | 0.00487 | 0.00564 | 4.55 |
| 8.00 | 0.00037 | 0.00026 | 0.00173 | 0.00733 | 0.00798 | 4.75 |
| 9.19 | 0.00037 | 0.00027 | 0.00189 | 0.01107 | 0.01112 | 4.55 |
| 10.56 | 0.00036 | 0.00027 | 0.00168 | 0.01154 | 0.01096 | 4.03 |
| 12.13 | 0.00040 | 0.00024 | 0.00123 | 0.00679 | 0.00621 | 3.36 |
| 13.93 | 0.00046 | 0.00025 | 0.00076 | 0.00299 | 0.00298 | 2.96 |
| 16.00 | 0.00041 | 0.00018 | 0.00054 | 0.00150 | 0.00158 | 2.93 |
| 18.38 | 0.00045 | 0.00019 | 0.00034 | 0.00098 | 0.00114 | 2.80 |
| 21.11 | 0.00039 | 0.00027 | 0.00026 | 0.00085 | 0.00106 | 2.49 |
| 24.25 | 0.00043 | 0.00021 | 0.00018 | 0.00070 | 0.00076 | 2.07 |
| 27.86 | 0.00042 | 0.00032 | 0.00021 | 0.00040 | 0.00079 | 1.80 |
| 32.00 | 0.00031 | 0.00016 | 0.00015 | 0.00025 | 0.00050 | 1.64 |
| 36.76 | 0.00031 | 0.00007 | .. | 0.00014 | 0.00056 | 1.09 |
| 42.22 | 0.00032 | .. | .. | .. | 0.00044 | 1.06 |
| 48.50 | 0.00011 | .. | .. | .. | .. | 0.50 |
| 55.72 | .. | .. | .. | .. | .. | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

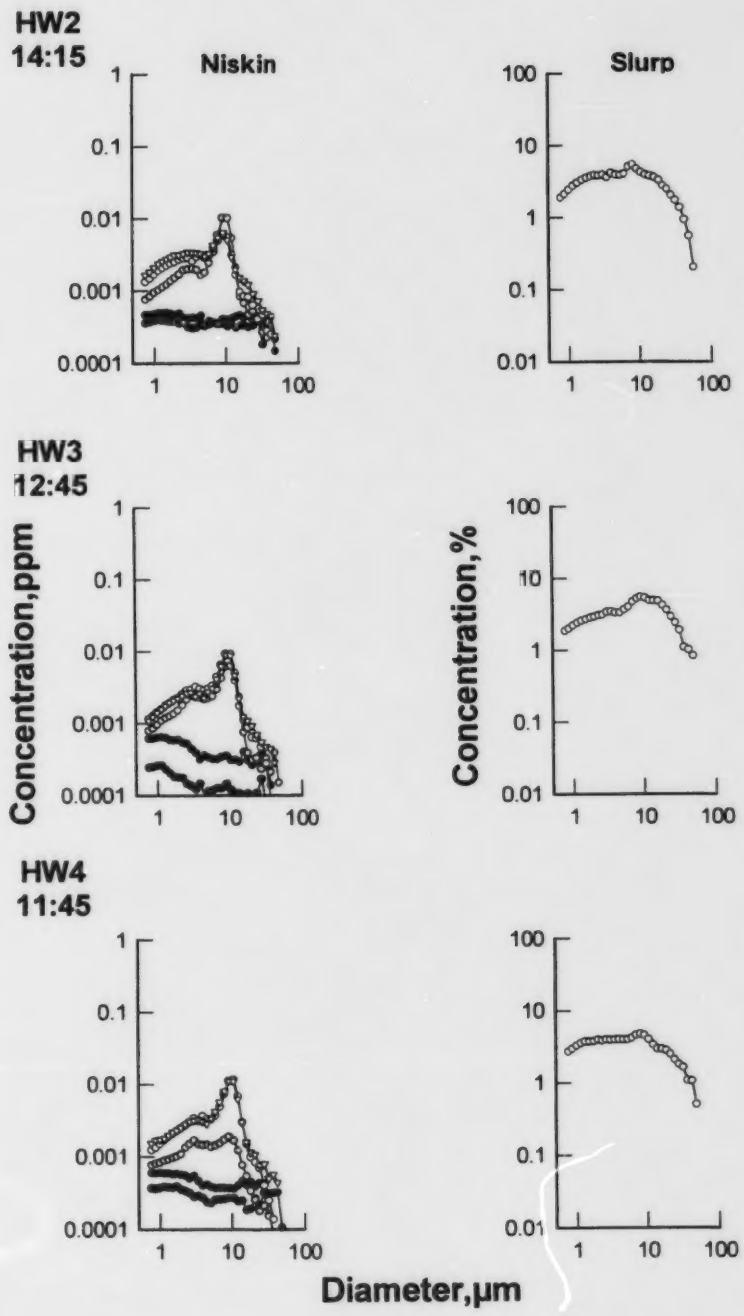


Figure 11. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles.

Table 29. Inorganic size spectra, raw data: Station HW5.

| Station | HW5 | HW5 | HW5 | HW5 | HW5 | HW5 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 74 | 77 | 78 |
| Time GMT | 1008 | 1008 | 1008 | 1008 | 1024 | 955 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 1.04 | 0.77 | 1.13 | 1.51 | 1.89 | 4.00 |
| Total PPM | 0.01021 | 0.01044 | 0.03631 | 0.14218 | 0.17195 | 100.00 |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00071 | 0.00049 | 0.00109 | 0.00182 | 0.00194 | 2.12 |
| 0.87 | 0.00069 | 0.00050 | 0.00108 | 0.00198 | 0.00213 | 2.30 |
| 1.00 | 0.00067 | 0.00053 | 0.00110 | 0.00224 | 0.00246 | 2.55 |
| 1.15 | 0.00063 | 0.00053 | 0.00110 | 0.00249 | 0.00282 | 2.75 |
| 1.32 | 0.00059 | 0.00054 | 0.00112 | 0.00280 | 0.00311 | 2.90 |
| 1.52 | 0.00056 | 0.00052 | 0.00112 | 0.00308 | 0.00349 | 3.03 |
| 1.74 | 0.00051 | 0.00052 | 0.00115 | 0.00345 | 0.00377 | 3.05 |
| 2.00 | 0.00049 | 0.00051 | 0.00114 | 0.00374 | 0.00420 | 3.27 |
| 2.30 | 0.00044 | 0.00052 | 0.00123 | 0.00424 | 0.00487 | 3.21 |
| 2.64 | 0.00042 | 0.00048 | 0.00122 | 0.00469 | 0.00520 | 3.40 |
| 3.03 | 0.00041 | 0.00048 | 0.00126 | 0.00497 | 0.00560 | 3.39 |
| 3.48 | 0.00035 | 0.00041 | 0.00123 | 0.00547 | 0.00527 | 3.31 |
| 4.00 | 0.00032 | 0.00043 | 0.00118 | 0.00512 | 0.00596 | 3.54 |
| 4.59 | 0.00030 | 0.00038 | 0.00103 | 0.00510 | 0.00572 | 3.13 |
| 5.28 | 0.00032 | 0.00036 | 0.00151 | 0.00600 | 0.00683 | 3.46 |
| 6.06 | 0.00025 | 0.00036 | 0.00199 | 0.00738 | 0.00803 | 4.52 |
| 6.96 | 0.00025 | 0.00037 | 0.00274 | 0.00996 | 0.01079 | 5.33 |
| 8.00 | 0.00022 | 0.00037 | 0.00330 | 0.01372 | 0.01483 | 5.97 |
| 9.19 | 0.00024 | 0.00035 | 0.00322 | 0.01742 | 0.01980 | 5.94 |
| 10.56 | 0.00022 | 0.00031 | 0.00227 | 0.01539 | 0.01974 | 5.12 |
| 12.13 | 0.00022 | 0.00030 | 0.00130 | 0.00920 | 0.01257 | 3.86 |
| 13.93 | 0.00019 | 0.00025 | 0.00084 | 0.00449 | 0.00663 | 3.22 |
| 16.00 | 0.00021 | 0.00023 | 0.00075 | 0.00236 | 0.00428 | 2.94 |
| 18.38 | 0.00019 | 0.00020 | 0.00065 | 0.00163 | 0.00326 | 2.66 |
| 21.11 | 0.00017 | 0.00013 | 0.00055 | 0.00140 | 0.00322 | 2.68 |
| 24.25 | 0.00025 | 0.00014 | 0.00059 | 0.00081 | 0.00218 | 2.34 |
| 27.86 | 0.00012 | 0.00019 | 0.00031 | 0.00049 | 0.00162 | 2.20 |
| 32.00 | 0.00017 | 0.00006 | 0.00022 | 0.00035 | 0.00081 | 1.92 |
| 36.76 | 0.00010 | .. | .. | 0.00022 | 0.00055 | 1.90 |
| 42.22 | .. | .. | .. | 0.00016 | 0.00027 | 1.59 |
| 48.50 | .. | .. | .. | .. | .. | 0.99 |
| 55.72 | .. | .. | .. | .. | .. | 0.85 |
| 64.00 | .. | .. | .. | .. | .. | 0.57 |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

Table 30. Inorganic size spectra, raw data: Station HW6.

| Station | HW6 | HW6 | HW6 | HW6 | HW6 | HW6 |
|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | 82 |
| Time GMT | 837 | 837 | 837 | 837 | 852 | 823 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | slurp |
| Total SPM | 0.64 | 0.77 | 0.43 | 1.62 | 10.09 | 16.24 |
| Total PPM | 0.00785 | 0.00785 | 0.02876 | 0.07436 | 0.17832 | 100.00 |
| Diameter (µm) | | | | | | |
| 0.76 | 0.00031 | 0.00040 | 0.00065 | 0.00125 | 0.00292 | 2.06 |
| 0.87 | 0.00031 | 0.00041 | 0.00072 | 0.00135 | 0.00321 | 2.32 |
| 1.00 | 0.00032 | 0.00043 | 0.00080 | 0.00149 | 0.00356 | 2.64 |
| 1.15 | 0.00031 | 0.00042 | 0.00088 | 0.00166 | 0.00391 | 2.97 |
| 1.32 | 0.00032 | 0.00041 | 0.00097 | 0.00182 | 0.00429 | 3.26 |
| 1.52 | 0.00032 | 0.00038 | 0.00105 | 0.00198 | 0.00470 | 3.56 |
| 1.74 | 0.00034 | 0.00037 | 0.00113 | 0.00219 | 0.00510 | 3.76 |
| 2.00 | 0.00033 | 0.00035 | 0.00121 | 0.00237 | 0.00560 | 3.94 |
| 2.30 | 0.00034 | 0.00033 | 0.00122 | 0.00260 | 0.00621 | 4.04 |
| 2.64 | 0.00030 | 0.00031 | 0.00133 | 0.00280 | 0.00661 | 4.11 |
| 3.03 | 0.00029 | 0.00028 | 0.00132 | 0.00286 | 0.00684 | 4.28 |
| 3.48 | 0.00024 | 0.00025 | 0.00133 | 0.00269 | 0.00688 | 4.02 |
| 4.00 | 0.00024 | 0.00023 | 0.00120 | 0.00302 | 0.00712 | 4.20 |
| 4.59 | 0.00025 | 0.00024 | 0.00098 | 0.00290 | 0.00709 | 4.11 |
| 5.28 | 0.00025 | 0.00023 | 0.00110 | 0.00310 | 0.00737 | 4.03 |
| 6.06 | 0.00024 | 0.00023 | 0.00145 | 0.00346 | 0.00821 | 4.27 |
| 6.96 | 0.00023 | 0.00025 | 0.00196 | 0.00466 | 0.01049 | 5.69 |
| 8.00 | 0.00023 | 0.00026 | 0.00250 | 0.00642 | 0.01396 | 6.32 |
| 9.19 | 0.00025 | 0.00027 | 0.00253 | 0.00786 | 0.01734 | 5.21 |
| 10.56 | 0.00023 | 0.00026 | 0.00169 | 0.00664 | 0.01632 | 4.35 |
| 12.13 | 0.00022 | 0.00024 | 0.00082 | 0.00367 | 0.01003 | 3.47 |
| 13.93 | 0.00023 | 0.00025 | 0.00048 | 0.00193 | 0.00567 | 2.77 |
| 16.00 | 0.00025 | 0.00022 | 0.00033 | 0.00124 | 0.00366 | 2.34 |
| 18.38 | 0.00027 | 0.00029 | 0.00028 | 0.00102 | 0.00296 | 2.15 |
| 21.11 | 0.00025 | 0.00016 | 0.00023 | 0.00093 | 0.00262 | 1.80 |
| 24.25 | 0.00025 | 0.00015 | 0.00028 | 0.00067 | 0.00206 | 1.80 |
| 27.86 | 0.00028 | 0.00021 | 0.00026 | 0.00068 | 0.00174 | 1.64 |
| 32.00 | 0.00022 | 0.00003 | 0.00008 | 0.00044 | 0.00118 | 1.47 |
| 36.76 | 0.00007 | .. | .. | 0.00040 | 0.00069 | 1.44 |
| 42.22 | 0.00010 | .. | .. | 0.00027 | .. | 1.16 |
| 48.50 | 0.00005 | .. | .. | .. | .. | 0.83 |
| 55.72 | .. | .. | .. | .. | .. | .. |
| 64.00 | .. | .. | .. | .. | .. | .. |
| 73.52 | .. | .. | .. | .. | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. |

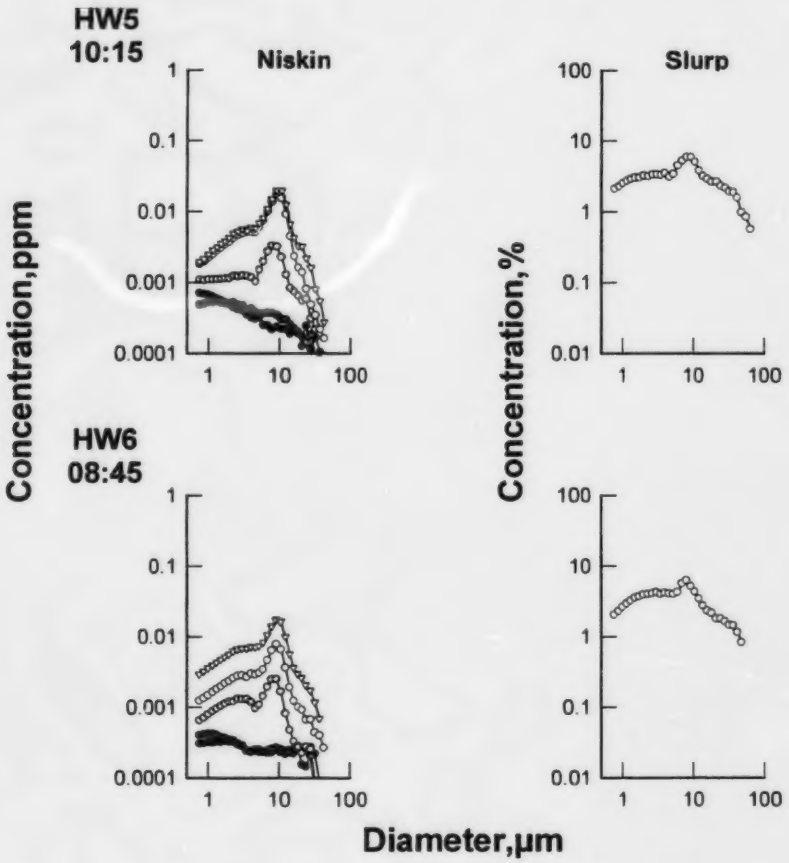


Figure 12. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles.

Table 31. Inorganic size spectra, raw data: Station HAS1.01.

| Station | HAS1.01 | HAS1.01 | HAS1.01 | HAS1.01 | HAS1.01 | HAS1.01 | HAS1.01 | HAS1.01 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 80 |
| Time GMT | 1319 | 1319 | 1319 | 1319 | 1338 | 1447 | 1447 | 1256 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.42 | 0.46 | 0.32 | 0.39 | 0.75 | 9.74 | 87.81 | 1.80 |
| Total PPM | 0.01809 | 0.01253 | 0.05516 | 0.05707 | 0.13558 | 1.69888 | 2.23665 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00041 | .. | 0.00093 | 0.00119 | 0.00223 | 0.02033 | 0.01725 | 3.15 |
| 0.87 | 0.00044 | 0.00041 | 0.00094 | 0.00130 | 0.00240 | 0.01968 | 0.01845 | 3.38 |
| 1.00 | 0.00046 | 0.00043 | 0.00099 | 0.00148 | 0.00269 | 0.02012 | 0.01996 | 3.64 |
| 1.15 | 0.00049 | 0.00045 | 0.00107 | 0.00167 | 0.00304 | 0.02054 | 0.02175 | 3.91 |
| 1.32 | 0.00050 | 0.00046 | 0.00113 | 0.00176 | 0.00332 | 0.02112 | 0.02412 | 4.03 |
| 1.52 | 0.00053 | 0.00048 | 0.00120 | 0.00194 | 0.00362 | 0.02161 | 0.02628 | 4.21 |
| 1.74 | 0.00057 | 0.00051 | 0.00130 | 0.00204 | 0.00399 | 0.02227 | 0.02946 | 4.12 |
| 2.00 | 0.00057 | 0.00051 | 0.00145 | 0.00214 | 0.00423 | 0.02286 | 0.03200 | 4.23 |
| 2.30 | 0.00063 | 0.00054 | 0.00171 | 0.00234 | 0.00454 | 0.02366 | 0.03643 | 4.33 |
| 2.64 | 0.00069 | 0.00054 | 0.00203 | 0.00238 | 0.00482 | 0.02508 | 0.03674 | 4.02 |
| 3.03 | 0.00067 | 0.00053 | 0.00216 | 0.00235 | 0.00480 | 0.02538 | 0.04085 | 3.79 |
| 3.48 | 0.00060 | 0.00043 | 0.00200 | 0.00227 | 0.00455 | 0.02601 | 0.04489 | 3.94 |
| 4.00 | 0.00072 | 0.00045 | 0.00214 | 0.00249 | 0.00548 | 0.02605 | 0.05031 | 3.85 |
| 4.59 | 0.00066 | 0.00049 | 0.00211 | 0.00286 | 0.00524 | 0.02753 | 0.05708 | 3.62 |
| 5.28 | 0.00072 | 0.00036 | 0.00240 | 0.00273 | 0.00491 | 0.02992 | 0.05787 | 3.53 |
| 6.06 | 0.00076 | 0.00040 | 0.00275 | 0.00295 | 0.00506 | 0.03158 | 0.06530 | 3.67 |
| 6.96 | 0.00081 | 0.00047 | 0.00338 | 0.00405 | 0.00619 | 0.03468 | 0.07422 | 3.89 |
| 8.00 | 0.00095 | 0.00048 | 0.00449 | 0.00453 | 0.00689 | 0.03960 | 0.08964 | 3.99 |
| 9.19 | 0.00100 | 0.00050 | 0.00561 | 0.00400 | 0.00689 | 0.04405 | 0.10085 | 3.75 |
| 10.56 | 0.00103 | 0.00051 | 0.00526 | 0.00309 | 0.00606 | 0.05080 | 0.11180 | 3.47 |
| 12.13 | 0.00096 | 0.00048 | 0.00361 | 0.00217 | 0.00478 | 0.06084 | 0.12455 | 3.22 |
| 13.93 | 0.00096 | 0.00050 | 0.00199 | 0.00150 | 0.00432 | 0.07280 | 0.14065 | 2.82 |
| 16.00 | 0.00081 | 0.00054 | 0.00133 | 0.00106 | 0.00441 | 0.08651 | 0.15487 | 2.57 |
| 18.38 | 0.00062 | 0.00044 | 0.00095 | 0.00070 | 0.00406 | 0.10874 | 0.16210 | 2.32 |
| 21.11 | 0.00045 | 0.00036 | 0.00068 | 0.00055 | 0.00449 | 0.14140 | 0.15890 | 1.99 |
| 24.25 | 0.00030 | 0.00032 | 0.00056 | 0.00040 | 0.00410 | 0.18612 | 0.13047 | 2.16 |
| 27.86 | 0.00025 | 0.00032 | 0.00031 | 0.00039 | 0.00416 | 0.20441 | 0.09947 | 1.70 |
| 32.00 | 0.00031 | 0.00027 | 0.00038 | 0.00028 | 0.00367 | 0.17020 | 0.07030 | 1.37 |
| 36.76 | 0.00022 | 0.00026 | 0.00030 | 0.00029 | 0.00374 | 0.08218 | 0.04558 | 1.37 |
| 42.22 | .. | 0.00007 | .. | 0.00016 | 0.00235 | 0.02421 | 0.03635 | 1.06 |
| 48.50 | .. | .. | .. | .. | 0.00218 | 0.00618 | 0.04033 | 0.87 |
| 55.72 | .. | .. | .. | .. | 0.00124 | 0.00244 | 0.03476 | 1.10 |
| 64.00 | .. | .. | .. | .. | 0.00116 | .. | 0.02989 | 0.94 |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.02104 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | 0.02601 | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | 0.00613 | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 32. Inorganic size spectra, raw data: Station HAS1.02.

| Station | HAS1.02 | HAS1.02 | HAS1.02 | HAS1.02 | HAS1.02 | HAS1.02 | HAS1.02 | HAS1.02 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 83 | (0.35-0.50) | (0.05-0.25) | 82 |
| Time GMT | 1534 | 1534 | 1534 | 1534 | 1600 | 1616 | 1616 | 1506 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.54 | 0.51 | 1.78 | 0.84 | 0.98 | 3.00 | 8.37 | 2.34 |
| Total PPM | 0.01508 | 0.01505 | 0.21033 | 0.06595 | 0.14934 | 0.80735 | 1.29871 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00049 | 0.00055 | 0.00307 | 0.00113 | 0.00330 | 0.00494 | 0.00868 | 2.03 |
| 0.87 | 0.00051 | 0.00055 | 0.00328 | 0.00119 | 0.00355 | 0.00494 | 0.00901 | 2.09 |
| 1.00 | 0.00054 | 0.00059 | 0.00367 | 0.00134 | 0.00394 | 0.00503 | 0.00992 | 2.21 |
| 1.15 | 0.00056 | 0.00063 | 0.00400 | 0.00150 | 0.00432 | 0.00514 | 0.01119 | 2.34 |
| 1.32 | 0.00056 | 0.00061 | 0.00444 | 0.00164 | 0.00473 | 0.00508 | 0.01178 | 2.44 |
| 1.52 | 0.00060 | 0.00062 | 0.00481 | 0.00181 | 0.00504 | 0.00508 | 0.01257 | 2.60 |
| 1.74 | 0.00059 | 0.00062 | 0.00529 | 0.00197 | 0.00539 | 0.00524 | 0.01334 | 2.63 |
| 2.00 | 0.00059 | 0.00063 | 0.00566 | 0.00207 | 0.00568 | 0.00532 | 0.01518 | 2.87 |
| 2.30 | 0.00061 | 0.00062 | 0.00598 | 0.00221 | 0.00595 | 0.00544 | 0.01612 | 2.94 |
| 2.64 | 0.00060 | 0.00064 | 0.00658 | 0.00230 | 0.00621 | 0.00537 | 0.01763 | 3.19 |
| 3.03 | 0.00062 | 0.00055 | 0.00700 | 0.00247 | 0.00633 | 0.00567 | 0.01922 | 3.20 |
| 3.48 | 0.00049 | 0.00063 | 0.00660 | 0.00256 | 0.00646 | 0.00568 | 0.02070 | 2.95 |
| 4.00 | 0.00048 | 0.00048 | 0.00779 | 0.00259 | 0.00652 | 0.00705 | 0.02144 | 3.24 |
| 4.59 | 0.00045 | 0.00054 | 0.00836 | 0.00260 | 0.00648 | 0.00645 | 0.02522 | 3.45 |
| 5.28 | 0.00044 | 0.00049 | 0.00860 | 0.00272 | 0.00603 | 0.00851 | 0.02719 | 3.70 |
| 6.06 | 0.00044 | 0.00048 | 0.00916 | 0.00319 | 0.00603 | 0.00935 | 0.03054 | 4.08 |
| 6.96 | 0.00043 | 0.00048 | 0.01017 | 0.00441 | 0.00702 | 0.01134 | 0.03625 | 4.65 |
| 8.00 | 0.00043 | 0.00046 | 0.01056 | 0.00524 | 0.00732 | 0.01412 | 0.04376 | 4.90 |
| 9.19 | 0.00043 | 0.00045 | 0.01033 | 0.00565 | 0.00750 | 0.01676 | 0.04884 | 4.75 |
| 10.56 | 0.00041 | 0.00046 | 0.01000 | 0.00500 | 0.00654 | 0.01918 | 0.05426 | 4.42 |
| 12.13 | 0.00040 | 0.00043 | 0.00938 | 0.00371 | 0.00501 | 0.02320 | 0.06189 | 4.04 |
| 13.93 | 0.00046 | 0.00049 | 0.00881 | 0.00274 | 0.00459 | 0.02864 | 0.07083 | 3.63 |
| 16.00 | 0.00052 | 0.00040 | 0.00795 | 0.00197 | 0.00415 | 0.03518 | 0.07966 | 3.45 |
| 18.38 | 0.00046 | 0.00047 | 0.00735 | 0.00131 | 0.00411 | 0.04285 | 0.09011 | 3.30 |
| 21.11 | 0.00065 | 0.00044 | 0.00706 | 0.00091 | 0.00362 | 0.04660 | 0.10014 | 3.08 |
| 24.25 | 0.00047 | 0.00042 | 0.00637 | 0.00057 | 0.00344 | 0.06158 | 0.10815 | 3.09 |
| 27.86 | 0.00049 | 0.00046 | 0.00638 | 0.00049 | 0.00275 | 0.07414 | 0.11323 | 2.71 |
| 32.00 | 0.00047 | 0.00025 | 0.00589 | 0.00043 | 0.00271 | 0.07708 | 0.09903 | 2.58 |
| 36.76 | 0.00031 | 0.00034 | 0.00530 | 0.00025 | 0.00255 | 0.06051 | 0.06717 | 2.39 |
| 42.22 | 0.00036 | 0.00027 | 0.00454 | .. | 0.00126 | 0.06535 | 0.03577 | 1.81 |
| 48.50 | 0.00019 | .. | 0.00385 | .. | 0.00079 | 0.05332 | 0.01283 | 1.41 |
| 55.72 | .. | .. | 0.00211 | .. | .. | 0.03724 | 0.00631 | 1.59 |
| 64.00 | .. | .. | .. | .. | .. | 0.03843 | 0.00076 | 1.22 |
| 73.52 | .. | .. | .. | .. | .. | 0.00756 | .. | 1.03 |
| 84.45 | .. | .. | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 33. Inorganic size spectra, raw data: Station HAS1.03.

| Station | HAS1.03 | HAS1.03 | HAS1.03 | HAS1.03 | HAS1.03 | HAS1.03 | HAS1.03 | HAS1.03 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 83 | (0.35-0.50) | (0.05-0.25) | 83 |
| Time GMT | 1720 | 1720 | 1720 | 1720 | 1734 | 1747 | 1747 | 1704 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.87 | 0.74 | 1.01 | 0.90 | 1.02 | 3.56 | 7.84 | 2.24 |
| Total PPM | 0.01083 | 0.00667 | 0.02797 | 0.04501 | 0.12098 | 1.69959 | 2.15432 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00054 | 0.00043 | 0.00108 | 0.00106 | 0.00261 | 0.01201 | 0.01299 | 2.37 |
| 0.87 | 0.00047 | 0.00032 | 0.00109 | 0.00112 | 0.00270 | 0.01157 | 0.01403 | 2.49 |
| 1.00 | 0.00043 | 0.00030 | 0.00111 | 0.00123 | 0.00286 | 0.01170 | 0.01599 | 2.70 |
| 1.15 | 0.00038 | 0.00029 | 0.00114 | 0.00139 | 0.00309 | 0.01187 | 0.01794 | 2.93 |
| 1.32 | 0.00037 | 0.00027 | 0.00116 | 0.00152 | 0.00328 | 0.01199 | 0.02044 | 3.01 |
| 1.52 | 0.00034 | 0.00028 | 0.00117 | 0.00169 | 0.00349 | 0.01209 | 0.02295 | 3.19 |
| 1.74 | 0.00033 | 0.00027 | 0.00117 | 0.00179 | 0.00367 | 0.01194 | 0.02564 | 3.29 |
| 2.00 | 0.00034 | 0.00024 | 0.00116 | 0.00199 | 0.00375 | 0.01169 | 0.02909 | 3.43 |
| 2.30 | 0.00028 | 0.00025 | 0.00115 | 0.00207 | 0.00398 | 0.01140 | 0.03187 | 3.47 |
| 2.64 | 0.00028 | 0.00021 | 0.00107 | 0.00213 | 0.00405 | 0.01034 | 0.03670 | 3.58 |
| 3.03 | 0.00027 | 0.00019 | 0.00114 | 0.00226 | 0.00420 | 0.01045 | 0.04071 | 3.57 |
| 3.48 | 0.00022 | 0.00018 | 0.00104 | 0.00190 | 0.00367 | 0.00987 | 0.04333 | 3.55 |
| 4.00 | 0.00025 | 0.00016 | 0.00100 | 0.00221 | 0.00408 | 0.01000 | 0.05130 | 3.57 |
| 4.59 | 0.00026 | 0.00018 | 0.00095 | 0.00233 | 0.00422 | 0.01137 | 0.05725 | 3.41 |
| 5.28 | 0.00028 | 0.00017 | 0.00100 | 0.00214 | 0.00440 | 0.01218 | 0.06230 | 3.66 |
| 6.06 | 0.00029 | 0.00017 | 0.00111 | 0.00217 | 0.00464 | 0.01331 | 0.07011 | 4.00 |
| 6.96 | 0.00031 | 0.00017 | 0.00142 | 0.00288 | 0.00574 | 0.01594 | 0.08185 | 4.64 |
| 8.00 | 0.00030 | 0.00018 | 0.00147 | 0.00332 | 0.00642 | 0.01949 | 0.09680 | 5.22 |
| 9.19 | 0.00031 | 0.00017 | 0.00131 | 0.00305 | 0.00682 | 0.02362 | 0.11119 | 5.41 |
| 10.56 | 0.00032 | 0.00017 | 0.00114 | 0.00223 | 0.00608 | 0.02993 | 0.12263 | 5.21 |
| 12.13 | 0.00035 | 0.00019 | 0.00092 | 0.00125 | 0.00478 | 0.03683 | 0.13846 | 4.27 |
| 13.93 | 0.00035 | 0.00016 | 0.00093 | 0.00076 | 0.00424 | 0.04751 | 0.15339 | 3.35 |
| 16.00 | 0.00036 | 0.00020 | 0.00067 | 0.00057 | 0.00401 | 0.06002 | 0.16978 | 2.98 |
| 18.38 | 0.00039 | 0.00022 | 0.00063 | 0.00057 | 0.00409 | 0.07115 | 0.18081 | 2.71 |
| 21.11 | 0.00045 | 0.00018 | 0.00048 | 0.00036 | 0.00361 | 0.08156 | 0.17666 | 2.08 |
| 24.25 | 0.00043 | 0.00017 | 0.00055 | 0.00035 | 0.00360 | 0.09541 | 0.15788 | 2.24 |
| 27.86 | 0.00034 | 0.00017 | 0.00026 | 0.00030 | 0.00345 | 0.10966 | 0.11177 | 2.18 |
| 32.00 | 0.00034 | 0.00017 | 0.00034 | 0.00019 | 0.00360 | 0.12601 | 0.05977 | 1.87 |
| 36.76 | 0.00045 | 0.00018 | 0.00023 | 0.00018 | 0.00203 | 0.14278 | 0.02691 | 1.34 |
| 42.22 | 0.00024 | 0.00023 | 0.00006 | .. | 0.00165 | 0.15277 | 0.00890 | 1.53 |
| 48.50 | 0.00021 | 0.00017 | .. | .. | 0.00097 | 0.14181 | 0.00488 | 1.04 |
| 55.72 | 0.00025 | .. | .. | .. | 0.00094 | 0.15307 | .. | 1.05 |
| 64.00 | 0.00011 | .. | .. | .. | 0.00027 | 0.11368 | .. | 0.69 |
| 73.52 | .. | .. | .. | .. | .. | 0.07509 | .. | .. |
| 84.45 | .. | .. | .. | .. | .. | 0.01947 | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

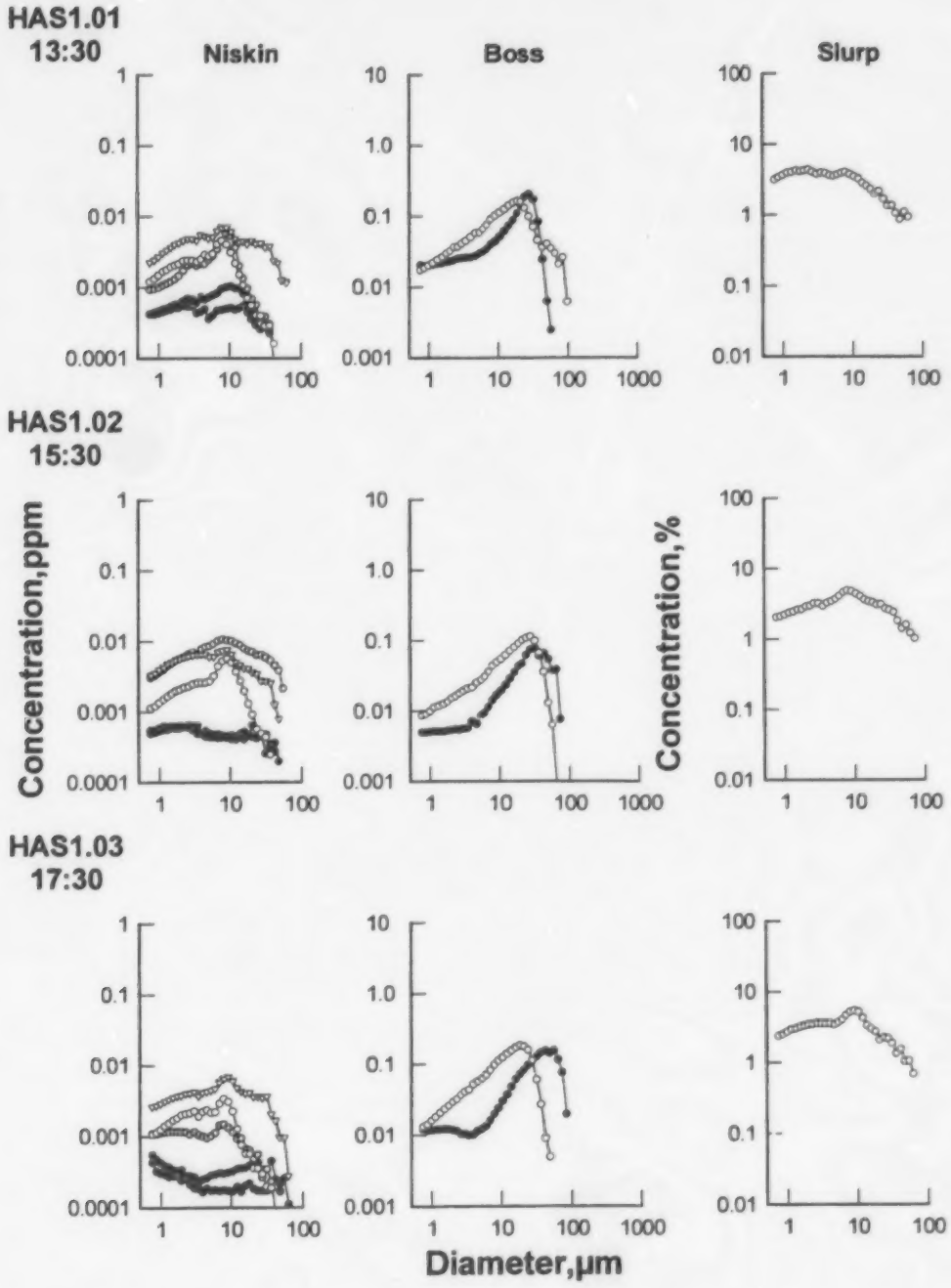


Figure 13. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles. For the BOSS samples the black circles are used for the 0.35-0.50 m above bottom sample and open circles are used for the 0.05-0.25 m sample.

Table 34. Inorganic size spectra, raw data: Station HAS1.04.

| Station | HAS1.04 | HAS1.04 | HAS1.04 | HAS1.04 | HAS1.04 | HAS1.04 | HAS1.04 | HAS1.04 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 83 | (0.35-0.50) | (0.05-0.25) | 82 |
| Time GMT | 1919 | 1919 | 1919 | 1919 | 1931 | 2017 | 2017 | 1903 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.79 | 0.58 | 0.49 | 0.93 | 1.92 | 3.84 | 20.37 | 11.09 |
| Total PPM | 0.00677 | 0.00929 | 0.05330 | 0.07733 | 0.12697 | 1.42679 | 2.36747 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00032 | 0.00049 | 0.00093 | 0.00147 | 0.00229 | 0.00711 | 0.02494 | 1.68 |
| 0.87 | 0.00031 | 0.00047 | 0.00093 | 0.00157 | 0.00243 | 0.00711 | 0.02470 | 1.87 |
| 1.00 | 0.00032 | 0.00046 | 0.00097 | 0.00172 | 0.00267 | 0.00726 | 0.02547 | 2.15 |
| 1.15 | 0.00031 | 0.00045 | 0.00103 | 0.00190 | 0.00297 | 0.00741 | 0.02663 | 2.45 |
| 1.32 | 0.00030 | 0.00041 | 0.00106 | 0.00210 | 0.00319 | 0.00733 | 0.02779 | 2.71 |
| 1.52 | 0.00029 | 0.00039 | 0.00111 | 0.00234 | 0.00350 | 0.00771 | 0.02897 | 2.98 |
| 1.74 | 0.00027 | 0.00035 | 0.00116 | 0.00253 | 0.00369 | 0.00799 | 0.03050 | 3.19 |
| 2.00 | 0.00025 | 0.00033 | 0.00125 | 0.00271 | 0.00398 | 0.00828 | 0.03255 | 3.36 |
| 2.30 | 0.00025 | 0.00032 | 0.00131 | 0.00291 | 0.00421 | 0.00907 | 0.03384 | 3.51 |
| 2.64 | 0.00023 | 0.00027 | 0.00135 | 0.00306 | 0.00467 | 0.01008 | 0.03666 | 3.55 |
| 3.03 | 0.00022 | 0.00027 | 0.00141 | 0.00313 | 0.00482 | 0.01094 | 0.03915 | 3.66 |
| 3.48 | 0.00020 | 0.00024 | 0.00153 | 0.00320 | 0.00522 | 0.01180 | 0.04215 | 3.63 |
| 4.00 | 0.00018 | 0.00026 | 0.00156 | 0.00339 | 0.00565 | 0.01500 | 0.04725 | 3.75 |
| 4.59 | 0.00019 | 0.00020 | 0.00163 | 0.00330 | 0.00601 | 0.01644 | 0.05114 | 3.76 |
| 5.28 | 0.00018 | 0.00019 | 0.00178 | 0.00334 | 0.00581 | 0.01985 | 0.05496 | 3.60 |
| 6.06 | 0.00018 | 0.00020 | 0.00202 | 0.00383 | 0.00600 | 0.02448 | 0.06132 | 3.68 |
| 6.96 | 0.00018 | 0.00020 | 0.00254 | 0.00491 | 0.00706 | 0.03170 | 0.07206 | 4.59 |
| 8.00 | 0.00017 | 0.00020 | 0.00292 | 0.00565 | 0.00752 | 0.04025 | 0.08514 | 4.79 |
| 9.19 | 0.00020 | 0.00022 | 0.00332 | 0.00575 | 0.00750 | 0.05003 | 0.09751 | 4.01 |
| 10.56 | 0.00018 | 0.00023 | 0.00365 | 0.00492 | 0.00661 | 0.05965 | 0.11006 | 3.65 |
| 12.13 | 0.00021 | 0.00027 | 0.00396 | 0.00352 | 0.00503 | 0.06940 | 0.12361 | 3.23 |
| 13.93 | 0.00026 | 0.00038 | 0.00409 | 0.00257 | 0.00404 | 0.07557 | 0.14238 | 3.13 |
| 16.00 | 0.00023 | 0.00036 | 0.00377 | 0.00199 | 0.00357 | 0.08389 | 0.16884 | 3.03 |
| 18.38 | 0.00024 | 0.00037 | 0.00303 | 0.00143 | 0.00345 | 0.09899 | 0.19256 | 2.77 |
| 21.11 | 0.00026 | 0.00037 | 0.00210 | 0.00107 | 0.00301 | 0.10260 | 0.21084 | 2.89 |
| 24.25 | 0.00029 | 0.00025 | 0.00102 | 0.00089 | 0.00300 | 0.13255 | 0.20997 | 2.46 |
| 27.86 | 0.00010 | 0.00037 | 0.00068 | 0.00094 | 0.00287 | 0.13990 | 0.16526 | 2.42 |
| 32.00 | 0.00026 | 0.00037 | 0.00038 | 0.00062 | 0.00230 | 0.14319 | 0.10878 | 1.78 |
| 36.76 | 0.00019 | 0.00023 | 0.00037 | 0.00056 | 0.00157 | 0.11819 | 0.05344 | 2.11 |
| 42.22 | .. | 0.00013 | 0.00027 | .. | 0.00155 | 0.06289 | 0.02502 | 1.71 |
| 48.50 | .. | 0.00006 | 0.00017 | .. | 0.00080 | 0.03022 | 0.00928 | 1.61 |
| 55.72 | .. | .. | .. | .. | .. | 0.00989 | 0.00466 | 1.80 |
| 64.00 | .. | .. | .. | .. | .. | .. | .. | 1.94 |
| 73.52 | .. | .. | .. | .. | .. | .. | .. | 1.64 |
| 84.45 | .. | .. | .. | .. | .. | .. | .. | 0.90 |
| 97.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 35. Inorganic size spectra, raw data: Station HAS1.05.

| Station | HAS1.05 | HAS1.05 | HAS1.05 | HAS1.05 | HAS1.05 | HAS1.05 | HAS1.05 | HAS1.05 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 80 |
| Time GMT | 2127 | 2127 | 2127 | 2127 | 2141 | 2146 | 2146 | 2109 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.33 | 0.60 | 0.36 | 8.55 | 64.88 | 1.74 | 13.88 | 15.60 |
| Total PPM | 0.00897 | 0.00830 | 0.05450 | 0.08153 | 0.12760 | 0.73883 | 1.09515 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00032 | 0.00032 | 0.00064 | 0.00145 | 0.00300 | 0.00474 | 0.00743 | 1.82 |
| 0.87 | 0.00032 | 0.00031 | 0.00064 | 0.00156 | 0.00313 | 0.00460 | 0.00778 | 2.01 |
| 1.00 | 0.00033 | 0.00032 | 0.00067 | 0.00174 | 0.00338 | 0.00473 | 0.00822 | 2.32 |
| 1.15 | 0.00034 | 0.00033 | 0.00072 | 0.00195 | 0.00369 | 0.00492 | 0.00880 | 2.55 |
| 1.32 | 0.00035 | 0.00033 | 0.00076 | 0.00219 | 0.00402 | 0.00497 | 0.00950 | 2.89 |
| 1.52 | 0.00033 | 0.00032 | 0.00081 | 0.00238 | 0.00430 | 0.00516 | 0.01016 | 3.11 |
| 1.74 | 0.00032 | 0.00031 | 0.00086 | 0.00260 | 0.00460 | 0.00533 | 0.01102 | 3.26 |
| 2.00 | 0.00034 | 0.00030 | 0.00091 | 0.00273 | 0.00479 | 0.00540 | 0.01187 | 3.46 |
| 2.30 | 0.00030 | 0.00030 | 0.00096 | 0.00298 | 0.00505 | 0.00577 | 0.01289 | 3.62 |
| 2.64 | 0.00028 | 0.00029 | 0.00102 | 0.00310 | 0.00503 | 0.00609 | 0.01379 | 3.70 |
| 3.03 | 0.00028 | 0.00028 | 0.00106 | 0.00315 | 0.00507 | 0.00656 | 0.01534 | 3.70 |
| 3.48 | 0.00027 | 0.00029 | 0.00098 | 0.00333 | 0.00473 | 0.00678 | 0.01731 | 3.89 |
| 4.00 | 0.00023 | 0.00028 | 0.00122 | 0.00374 | 0.00542 | 0.00751 | 0.01713 | 3.92 |
| 4.59 | 0.00027 | 0.00027 | 0.00133 | 0.00357 | 0.00536 | 0.00795 | 0.02010 | 4.19 |
| 5.28 | 0.00029 | 0.00027 | 0.00144 | 0.00382 | 0.00532 | 0.00892 | 0.02158 | 4.06 |
| 6.06 | 0.00029 | 0.00026 | 0.00171 | 0.00408 | 0.00561 | 0.00994 | 0.02400 | 4.25 |
| 6.96 | 0.00030 | 0.00027 | 0.00238 | 0.00514 | 0.00668 | 0.01190 | 0.02841 | 5.47 |
| 8.00 | 0.00030 | 0.00027 | 0.00294 | 0.00599 | 0.00726 | 0.01418 | 0.03408 | 5.72 |
| 9.19 | 0.00030 | 0.00028 | 0.00337 | 0.00613 | 0.00687 | 0.01594 | 0.03857 | 4.71 |
| 10.56 | 0.00029 | 0.00025 | 0.00375 | 0.00542 | 0.00598 | 0.01780 | 0.04247 | 4.09 |
| 12.13 | 0.00028 | 0.00026 | 0.00417 | 0.00410 | 0.00493 | 0.02024 | 0.04648 | 3.69 |
| 13.93 | 0.00030 | 0.00025 | 0.00482 | 0.00300 | 0.00446 | 0.02458 | 0.05374 | 3.55 |
| 16.00 | 0.00033 | 0.00026 | 0.00485 | 0.00231 | 0.00393 | 0.02990 | 0.05843 | 3.24 |
| 18.38 | 0.00028 | 0.00024 | 0.00458 | 0.00164 | 0.00366 | 0.03522 | 0.06659 | 3.00 |
| 21.11 | 0.00028 | 0.00025 | 0.00342 | 0.00125 | 0.00308 | 0.03646 | 0.06374 | 2.71 |
| 24.25 | 0.00034 | 0.00029 | 0.00198 | 0.00093 | 0.00257 | 0.04962 | 0.08350 | 2.56 |
| 27.86 | 0.00033 | 0.00021 | 0.00106 | 0.00073 | 0.00225 | 0.06225 | 0.08678 | 2.20 |
| 32.00 | 0.00023 | 0.00027 | 0.00073 | 0.00049 | 0.00157 | 0.06888 | 0.08608 | 1.84 |
| 36.76 | 0.00029 | 0.00023 | 0.00039 | .. | 0.00101 | 0.07898 | 0.07763 | 1.40 |
| 42.22 | 0.00026 | 0.00018 | 0.00032 | .. | 0.00043 | 0.07511 | 0.05200 | 0.85 |
| 48.50 | .. | .. | .. | .. | 0.00043 | 0.05735 | 0.03126 | 0.89 |
| 55.72 | .. | .. | .. | .. | .. | 0.03111 | 0.01460 | 0.99 |
| 64.00 | .. | .. | .. | .. | .. | 0.00993 | 0.01047 | 0.39 |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.00340 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 36. Inorganic size spectra, raw data: Station HAS1.06.

| Station | HAS1.06 | HAS1.06 | HAS1.06 | HAS1.06 | HAS1.06 | HAS1.06 | HAS1.06 | HAS1.06 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 80 |
| Time GMT | 2323 | 2323 | 2323 | 2323 | 2332 | 2350 | 2350 | 2306 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.41 | 0.75 | 0.57 | 0.54 | 1.17 | 2.60 | 8.69 | 113.67 |
| Total PPM | 0.01012 | 0.02638 | 0.07292 | 0.08293 | 0.09403 | 0.93867 | 1.31698 | 100.00 |
| Diameter (μm) | | | | | | | | |
| 0.76 | 0.00040 | 0.00072 | 0.00121 | 0.00148 | .. | 0.00419 | 0.01370 | 2.02 |
| 0.87 | 0.00038 | 0.00070 | 0.00122 | 0.00159 | 0.00200 | 0.00410 | 0.01365 | 2.19 |
| 1.00 | 0.00038 | 0.00071 | 0.00134 | 0.00177 | 0.00225 | 0.00418 | 0.01380 | 2.44 |
| 1.15 | 0.00039 | 0.00074 | 0.00141 | 0.00195 | 0.00251 | 0.00421 | 0.01409 | 2.71 |
| 1.32 | 0.00038 | 0.00074 | 0.00145 | 0.00216 | 0.00277 | 0.00429 | 0.01466 | 2.95 |
| 1.52 | 0.00037 | 0.00075 | 0.00150 | 0.00237 | 0.00304 | 0.00440 | 0.01544 | 3.22 |
| 1.74 | 0.00037 | 0.00078 | 0.00156 | 0.00253 | 0.00330 | 0.00437 | 0.01563 | 3.35 |
| 2.00 | 0.00035 | 0.00079 | 0.00164 | 0.00265 | 0.00352 | 0.00465 | 0.01565 | 3.53 |
| 2.30 | 0.00031 | 0.00078 | 0.00168 | 0.00276 | 0.00378 | 0.00485 | 0.01547 | 3.54 |
| 2.64 | 0.00036 | 0.00079 | 0.00199 | 0.00293 | 0.00389 | 0.00520 | 0.01642 | 3.72 |
| 3.03 | 0.00032 | 0.00079 | 0.00191 | 0.00301 | 0.00397 | 0.00572 | 0.01698 | 3.49 |
| 3.48 | 0.00032 | 0.00081 | 0.00185 | 0.00328 | 0.00421 | 0.00615 | 0.01287 | 3.34 |
| 4.00 | 0.00029 | 0.00078 | 0.00222 | 0.00343 | 0.00416 | 0.00695 | 0.01671 | 3.50 |
| 4.59 | 0.00026 | 0.00088 | 0.00235 | 0.00340 | 0.00433 | 0.00844 | 0.01888 | 3.37 |
| 5.28 | 0.00029 | 0.00084 | 0.00285 | 0.00354 | 0.00408 | 0.01009 | 0.01950 | 3.44 |
| 6.06 | 0.00028 | 0.00085 | 0.00324 | 0.00391 | 0.00412 | 0.01184 | 0.02018 | 3.64 |
| 6.96 | 0.00027 | 0.00088 | 0.00378 | 0.00528 | 0.00505 | 0.01460 | 0.02268 | 4.36 |
| 8.00 | 0.00025 | 0.00089 | 0.00438 | 0.00624 | 0.00558 | 0.01784 | 0.02568 | 4.47 |
| 9.19 | 0.00027 | 0.00090 | 0.00477 | 0.00624 | 0.00550 | 0.02142 | 0.02955 | 3.85 |
| 10.56 | 0.00026 | 0.00092 | 0.00480 | 0.00538 | 0.00443 | 0.02527 | 0.03242 | 3.55 |
| 12.13 | 0.00026 | 0.00093 | 0.00456 | 0.00391 | 0.00321 | 0.02978 | 0.03706 | 3.12 |
| 13.93 | 0.00034 | 0.00096 | 0.00407 | 0.00328 | 0.00254 | 0.03536 | 0.04226 | 3.20 |
| 16.00 | 0.00027 | 0.00093 | 0.00364 | 0.00253 | 0.00228 | 0.04053 | 0.04973 | 2.85 |
| 18.38 | 0.00027 | 0.00099 | 0.00291 | 0.00189 | 0.00213 | 0.04751 | 0.06031 | 2.69 |
| 21.11 | 0.00024 | 0.00106 | 0.00251 | 0.00147 | 0.00197 | 0.05047 | 0.06287 | 2.50 |
| 24.25 | 0.00042 | 0.00101 | 0.00187 | 0.00114 | 0.00191 | 0.06775 | 0.09134 | 2.44 |
| 27.86 | 0.00032 | 0.00096 | 0.00146 | 0.00085 | 0.00193 | 0.07791 | 0.10458 | 2.82 |
| 32.00 | 0.00031 | 0.00106 | 0.00124 | 0.00085 | 0.00181 | 0.08833 | 0.13768 | 2.14 |
| 36.76 | 0.00041 | 0.00120 | 0.00077 | 0.00050 | 0.00138 | 0.09613 | 0.13935 | 1.29 |
| 42.22 | 0.00023 | 0.00084 | 0.00079 | 0.00041 | 0.00107 | 0.08537 | 0.10370 | 1.71 |
| 48.50 | 0.00033 | 0.00036 | 0.00081 | 0.00021 | 0.00079 | 0.07330 | 0.07939 | 1.68 |
| 55.72 | 0.00022 | .. | 0.00066 | .. | 0.00057 | 0.04703 | 0.02890 | 1.81 |
| 64.00 | .. | .. | 0.00047 | .. | .. | 0.02641 | 0.01224 | 1.79 |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.00360 | 1.16 |
| 84.45 | .. | .. | .. | .. | .. | .. | .. | 1.47 |
| 97.01 | .. | .. | .. | .. | .. | .. | .. | 0.64 |
| 111.43 | .. | .. | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

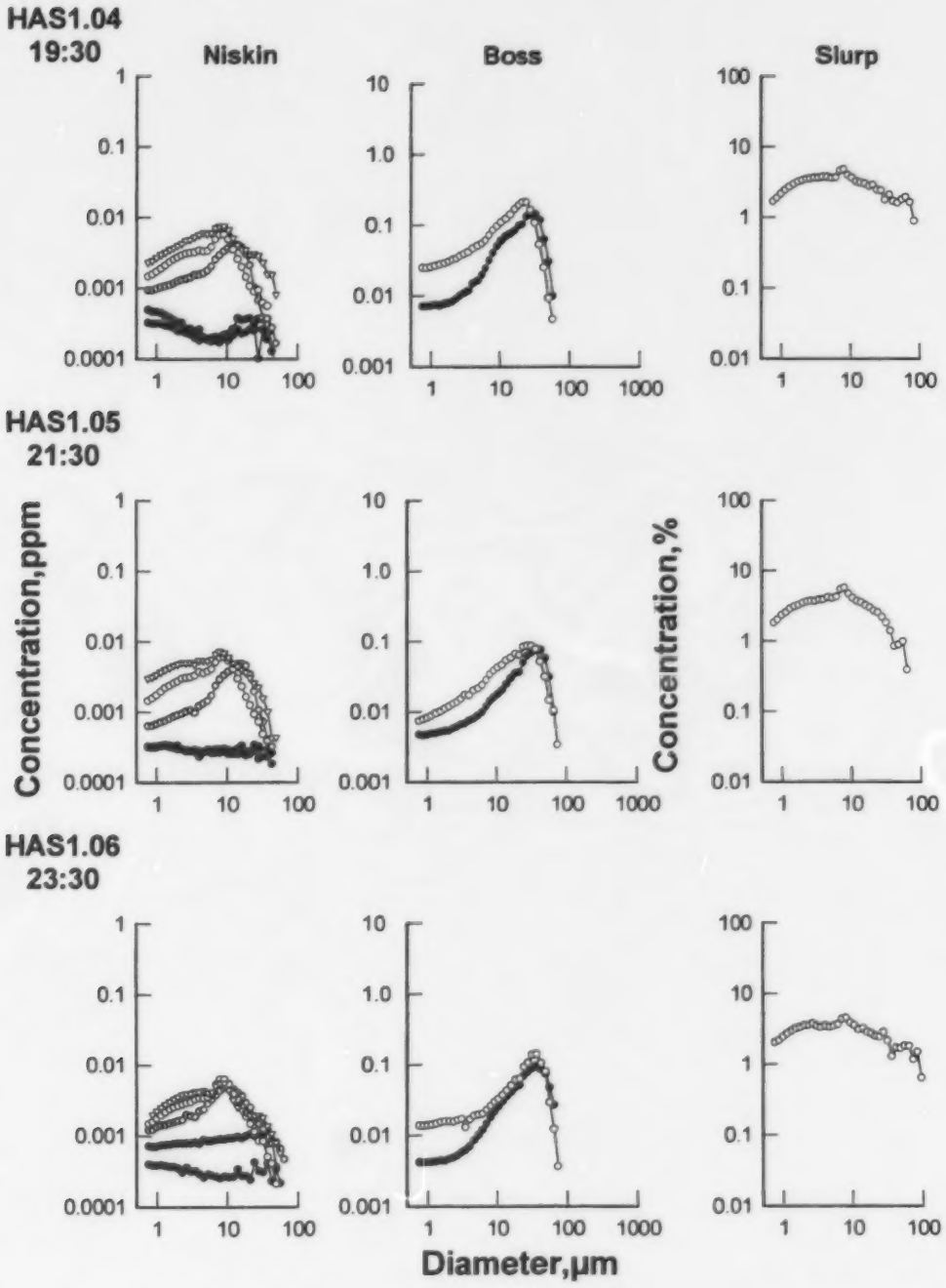


Figure 14. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles. For the BOSS samples the black circles are used for the 0.35-0.50 m above bottom sample and open circles are used for the 0.05-0.25 m sample.

Table 37. Inorganic size spectra, raw data: Station HAS1.07.

| Station | HAS1.07 | HAS1.07 | HAS1.07 | HAS1.07 | HAS1.07 | HAS1.07 | HAS1.07 | HAS1.07 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 80 |
| Time GMT | 114 | 114 | 114 | 114 | 130 | 206 | 206 | 102 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.77 | 0.51 | 0.43 | 0.59 | 2.58 | 6.59 | 27.85 | 54.74 |
| Total PPM | 0.00554 | 0.00890 | 0.34890 | 0.08904 | 0.07770 | 1.09635 | 15.80804 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00030 | 0.00044 | 0.00842 | 0.00158 | 0.00166 | 0.00877 | 0.00989 | 2.40 |
| 0.87 | 0.00029 | 0.00036 | 0.00925 | 0.00168 | 0.00178 | 0.00911 | 0.01063 | 2.64 |
| 1.00 | 0.00030 | 0.00038 | 0.01030 | 0.00187 | 0.00197 | 0.00995 | 0.01198 | 2.92 |
| 1.15 | 0.00030 | 0.00041 | 0.01169 | 0.00208 | 0.00218 | 0.01093 | 0.01356 | 3.22 |
| 1.32 | 0.00029 | 0.00041 | 0.01239 | 0.00227 | 0.00239 | 0.01186 | 0.01492 | 3.39 |
| 1.52 | 0.00029 | 0.00040 | 0.01276 | 0.00249 | 0.00262 | 0.01286 | 0.01679 | 3.59 |
| 1.74 | 0.00028 | 0.00042 | 0.01245 | 0.00270 | 0.00277 | 0.01379 | 0.01889 | 3.64 |
| 2.00 | 0.00029 | 0.00042 | 0.01304 | 0.00283 | 0.00304 | 0.01517 | 0.02172 | 3.66 |
| 2.30 | 0.00027 | 0.00045 | 0.01334 | 0.00300 | 0.00321 | 0.01644 | 0.02310 | 3.82 |
| 2.64 | 0.00022 | 0.00039 | 0.01374 | 0.00309 | 0.00329 | 0.01835 | 0.02738 | 3.66 |
| 3.03 | 0.00022 | 0.00034 | 0.01368 | 0.00309 | 0.00336 | 0.01913 | 0.03048 | 3.84 |
| 3.48 | 0.00021 | 0.00032 | 0.01239 | 0.00330 | 0.00354 | 0.01864 | 0.03337 | 3.58 |
| 4.00 | 0.00015 | 0.00032 | 0.01423 | 0.00335 | 0.00375 | 0.02130 | 0.03596 | 3.73 |
| 4.59 | 0.00017 | 0.00027 | 0.01461 | 0.00333 | 0.00394 | 0.02593 | 0.04201 | 3.26 |
| 5.28 | 0.00016 | 0.00026 | 0.01485 | 0.00367 | 0.00349 | 0.02954 | 0.04700 | 3.51 |
| 6.06 | 0.00015 | 0.00025 | 0.01550 | 0.00404 | 0.00350 | 0.03312 | 0.05260 | 3.58 |
| 6.96 | 0.00014 | 0.00024 | 0.01677 | 0.00533 | 0.00435 | 0.03862 | 0.06245 | 4.16 |
| 8.00 | 0.00013 | 0.00025 | 0.01705 | 0.00655 | 0.00501 | 0.04570 | 0.07600 | 4.41 |
| 9.19 | 0.00014 | 0.00023 | 0.01570 | 0.00693 | 0.00491 | 0.05225 | 0.08564 | 4.04 |
| 10.56 | 0.00014 | 0.00021 | 0.01385 | 0.00637 | 0.00398 | 0.05739 | 0.09344 | 3.83 |
| 12.13 | 0.00013 | 0.00019 | 0.01181 | 0.00504 | 0.00261 | 0.06324 | 0.10492 | 3.71 |
| 13.93 | 0.00014 | 0.00021 | 0.01060 | 0.00394 | 0.00207 | 0.06913 | 0.10911 | 3.47 |
| 16.00 | 0.00011 | 0.00021 | 0.01034 | 0.00307 | 0.00164 | 0.07700 | 0.12238 | 3.42 |
| 18.38 | 0.00012 | 0.00021 | 0.00978 | 0.00249 | 0.00135 | 0.08517 | 0.12302 | 3.27 |
| 21.11 | 0.00014 | 0.00023 | 0.00780 | 0.00177 | 0.00124 | 0.08309 | 0.12109 | 2.62 |
| 24.25 | 0.00010 | 0.00024 | 0.00875 | 0.00116 | 0.00123 | 0.09360 | 0.10724 | 2.34 |
| 27.86 | 0.00016 | 0.00030 | 0.00698 | 0.00082 | 0.00090 | 0.07288 | 0.07672 | 2.01 |
| 32.00 | 0.00013 | 0.00017 | 0.00547 | 0.00071 | 0.00060 | 0.04829 | 0.05527 | 1.90 |
| 36.76 | 0.00007 | 0.00021 | 0.00538 | 0.00046 | 0.00089 | 0.02176 | 0.03676 | 1.66 |
| 42.22 | .. | 0.00014 | 0.00350 | .. | 0.00043 | 0.00748 | 0.01825 | 1.13 |
| 48.50 | .. | .. | 0.00252 | .. | .. | 0.00316 | 0.01733 | 1.26 |
| 55.72 | .. | .. | .. | .. | .. | 0.00224 | 0.01852 | 1.51 |
| 64.00 | .. | .. | .. | .. | .. | 0.00046 | 0.01968 | 0.81 |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.02137 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | 0.01553 | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | 0.03981 | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | 0.02985 | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | 0.10846 | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | 0.21547 | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | 0.33810 | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | 1.29930 | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | 2.93822 | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | 4.34690 | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | 2.72910 | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | 2.06784 | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 38. Inorganic size spectra, raw data: Station HAS1.08.

| Station | HAS1.08 | HAS1.08 | HAS1.08 | HAS1.08 | HAS1.08 | HAS1.08 | HAS1.08 | HAS1.08 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 80 |
| Time GMT | 315 | 315 | 315 | 315 | 334 | 351 | 351 | 305 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.57 | 0.60 | 0.91 | 0.99 | 1.31 | 3.68 | 19.13 | 41.36 |
| Total PPM | 0.00524 | 0.00846 | 0.08890 | 0.11614 | 0.07553 | 0.67737 | 1.53842 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00024 | 0.00032 | 0.00111 | 0.00162 | 0.00150 | 0.00359 | .. | 1.27 |
| 0.87 | 0.00025 | 0.00031 | 0.00116 | 0.00173 | 0.00160 | 0.00347 | 0.01526 | 1.34 |
| 1.00 | 0.00025 | 0.00032 | 0.00130 | 0.00189 | 0.00177 | 0.00350 | 0.01582 | 1.54 |
| 1.15 | 0.00026 | 0.00033 | 0.00139 | 0.00211 | 0.00198 | 0.00359 | 0.01720 | 1.79 |
| 1.32 | 0.00025 | 0.00034 | 0.00148 | 0.00233 | 0.00220 | 0.00374 | 0.01909 | 1.79 |
| 1.52 | 0.00024 | 0.00031 | 0.00159 | 0.00262 | 0.00240 | 0.00376 | 0.02146 | 1.89 |
| 1.74 | 0.00022 | 0.00031 | 0.00178 | 0.00287 | 0.00259 | 0.00370 | 0.02396 | 2.03 |
| 2.00 | 0.00022 | 0.00031 | 0.00199 | 0.00308 | 0.00280 | 0.00391 | 0.02618 | 2.33 |
| 2.30 | 0.00017 | 0.00031 | 0.00231 | 0.00344 | 0.00292 | 0.00420 | 0.02849 | 2.76 |
| 2.64 | 0.00017 | 0.00029 | 0.00284 | 0.00378 | 0.00298 | 0.00448 | 0.03081 | 3.23 |
| 3.03 | 0.00019 | 0.00030 | 0.00321 | 0.00402 | 0.00308 | 0.00444 | 0.03411 | 3.54 |
| 3.48 | 0.00016 | 0.00028 | 0.00359 | 0.00369 | 0.00310 | 0.00531 | 0.03490 | 3.85 |
| 4.00 | 0.00018 | 0.00032 | 0.00339 | 0.00429 | 0.00323 | 0.00620 | 0.04180 | 3.70 |
| 4.59 | 0.00014 | 0.00029 | 0.00335 | 0.00460 | 0.00327 | 0.00695 | 0.04516 | 4.33 |
| 5.28 | 0.00016 | 0.00035 | 0.00347 | 0.00521 | 0.00316 | 0.00856 | 0.04632 | 4.43 |
| 6.06 | 0.00016 | 0.00031 | 0.00421 | 0.00542 | 0.00338 | 0.01039 | 0.05134 | 5.08 |
| 6.96 | 0.00016 | 0.00032 | 0.00532 | 0.00674 | 0.00437 | 0.01319 | 0.05920 | 6.25 |
| 8.00 | 0.00016 | 0.00033 | 0.00738 | 0.00809 | 0.00482 | 0.01653 | 0.06920 | 7.93 |
| 9.19 | 0.00015 | 0.00035 | 0.01045 | 0.00887 | 0.00476 | 0.01960 | 0.07695 | 10.15 |
| 10.56 | 0.00014 | 0.00031 | 0.01111 | 0.00832 | 0.00396 | 0.02323 | 0.08347 | 9.52 |
| 12.13 | 0.00015 | 0.00026 | 0.00733 | 0.00704 | 0.00261 | 0.02561 | 0.08973 | 6.42 |
| 13.93 | 0.00015 | 0.00022 | 0.00379 | 0.00635 | 0.00206 | 0.02973 | 0.09258 | 3.94 |
| 16.00 | 0.00018 | 0.00021 | 0.00198 | 0.00551 | 0.00171 | 0.03424 | 0.09847 | 2.92 |
| 18.38 | 0.00014 | 0.00018 | 0.00115 | 0.00398 | 0.00169 | 0.03932 | 0.10324 | 2.16 |
| 21.11 | 0.00018 | 0.00019 | 0.00087 | 0.00268 | 0.00144 | 0.04004 | 0.10119 | 1.72 |
| 24.25 | 0.00011 | 0.00018 | 0.00057 | 0.00191 | 0.00134 | 0.05064 | 0.08904 | 1.42 |
| 27.86 | 0.00015 | 0.00018 | 0.00031 | 0.00084 | 0.00128 | 0.06001 | 0.06694 | 0.98 |
| 32.00 | 0.00010 | 0.00018 | 0.00033 | 0.00074 | 0.00118 | 0.06102 | 0.04595 | 0.73 |
| 36.76 | 0.00011 | 0.00026 | 0.00016 | 0.00076 | 0.00087 | 0.05901 | 0.02571 | 0.62 |
| 42.22 | 0.00006 | 0.00014 | .. | 0.00082 | 0.00083 | 0.05084 | 0.02185 | 0.33 |
| 48.50 | 0.00005 | 0.00015 | .. | 0.00080 | 0.00063 | 0.03787 | 0.01818 | .. |
| 55.72 | .. | .. | .. | .. | .. | 0.02142 | 0.01286 | .. |
| 64.00 | .. | .. | .. | .. | .. | 0.00855 | 0.01756 | .. |
| 73.52 | .. | .. | .. | .. | .. | 0.00673 | 0.01440 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 39. Inorganic size spectra, raw data: Station HAS1.09.

| Station | HAS1.09 | HAS1.09 | HAS1.09 | HAS1.09 | HAS1.09 | HAS1.09 | HAS1.09 | HAS1.09 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 82 | (0.35-0.50) | (0.05-0.25) | 82 |
| Time GMT | 519 | 519 | 519 | 519 | 555 | 608 | 608 | 512 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.82 | 0.66 | 0.97 | 1.15 | 1.66 | 3.21 | 5.24 | 6.88 |
| Total PPM | 0.01753 | 0.01256 | 0.09949 | 0.08793 | 0.08218 | 1.16576 | 1.55333 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00058 | 0.00040 | 0.00131 | 0.00172 | 0.00174 | 0.00848 | 0.01545 | 2.30 |
| 0.87 | 0.00054 | 0.00037 | 0.00127 | 0.00181 | 0.00172 | 0.00814 | 0.01496 | 2.50 |
| 1.00 | 0.00054 | 0.00037 | 0.00140 | 0.00199 | 0.00178 | 0.00814 | 0.01543 | 2.77 |
| 1.15 | 0.00055 | 0.00036 | 0.00153 | 0.00219 | 0.00202 | 0.00801 | 0.01584 | 2.95 |
| 1.32 | 0.00056 | 0.00037 | 0.00169 | 0.00242 | 0.00217 | 0.00787 | 0.01616 | 3.18 |
| 1.52 | 0.00056 | 0.00037 | 0.00181 | 0.00259 | 0.00234 | 0.00787 | 0.01657 | 3.35 |
| 1.74 | 0.00054 | 0.00036 | 0.00198 | 0.00282 | 0.00262 | 0.00766 | 0.01679 | 3.51 |
| 2.00 | 0.00055 | 0.00036 | 0.00218 | 0.00292 | 0.00283 | 0.00753 | 0.01684 | 3.51 |
| 2.30 | 0.00053 | 0.00037 | 0.00253 | 0.00312 | 0.00295 | 0.00782 | 0.01685 | 3.82 |
| 2.64 | 0.00055 | 0.00036 | 0.00268 | 0.00331 | 0.00294 | 0.00828 | 0.01734 | 3.99 |
| 3.03 | 0.00061 | 0.00039 | 0.00287 | 0.00353 | 0.00315 | 0.00809 | 0.01724 | 3.84 |
| 3.48 | 0.00049 | 0.00040 | 0.00303 | 0.00375 | 0.00289 | 0.00817 | 0.01766 | 4.15 |
| 4.00 | 0.00052 | 0.00037 | 0.00309 | 0.00373 | 0.00336 | 0.00964 | 0.01827 | 4.35 |
| 4.59 | 0.00056 | 0.00037 | 0.00343 | 0.00368 | 0.00338 | 0.00976 | 0.01936 | 4.18 |
| 5.28 | 0.00055 | 0.00039 | 0.00347 | 0.00379 | 0.00345 | 0.01128 | 0.01942 | 4.02 |
| 6.06 | 0.00057 | 0.00040 | 0.00392 | 0.00411 | 0.00381 | 0.01261 | 0.02073 | 4.03 |
| 6.96 | 0.00058 | 0.00043 | 0.00491 | 0.00534 | 0.00498 | 0.01533 | 0.02291 | 4.38 |
| 8.00 | 0.00060 | 0.00045 | 0.00680 | 0.00645 | 0.00567 | 0.01876 | 0.02634 | 4.50 |
| 9.19 | 0.00062 | 0.00050 | 0.01011 | 0.00703 | 0.00535 | 0.02290 | 0.03028 | 3.98 |
| 10.56 | 0.00061 | 0.00053 | 0.01135 | 0.00631 | 0.00457 | 0.02738 | 0.03469 | 3.65 |
| 12.13 | 0.00066 | 0.00045 | 0.00805 | 0.00445 | 0.00315 | 0.03407 | 0.03933 | 3.37 |
| 13.93 | 0.00068 | 0.00045 | 0.00484 | 0.00316 | 0.00256 | 0.04392 | 0.04783 | 3.16 |
| 16.00 | 0.00075 | 0.00042 | 0.00325 | 0.00233 | 0.00217 | 0.05403 | 0.05851 | 2.99 |
| 18.38 | 0.00072 | 0.00045 | 0.00235 | 0.00180 | 0.00214 | 0.07006 | 0.07149 | 2.92 |
| 21.11 | 0.00068 | 0.00050 | 0.00219 | 0.00111 | 0.00186 | 0.08600 | 0.08434 | 2.46 |
| 24.25 | 0.00059 | 0.00054 | 0.00185 | 0.00088 | 0.00189 | 0.10423 | 0.10583 | 2.53 |
| 27.86 | 0.00057 | 0.00051 | 0.00154 | 0.00077 | 0.00155 | 0.13012 | 0.13210 | 2.09 |
| 32.00 | 0.00057 | 0.00049 | 0.00102 | 0.00057 | 0.00115 | 0.13711 | 0.15464 | 2.00 |
| 36.76 | 0.00057 | 0.00034 | 0.00123 | 0.00025 | 0.00102 | 0.11927 | 0.18150 | 2.14 |
| 42.22 | 0.00030 | 0.00031 | 0.00070 | .. | 0.00059 | 0.08911 | 0.15058 | 1.51 |
| 48.50 | 0.00024 | 0.00016 | 0.00073 | .. | 0.00036 | 0.04415 | 0.08631 | 1.03 |
| 55.72 | .. | .. | 0.00038 | .. | .. | 0.02028 | 0.03479 | 0.86 |
| 64.00 | .. | .. | .. | .. | .. | 0.00969 | 0.01309 | .. |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.00387 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

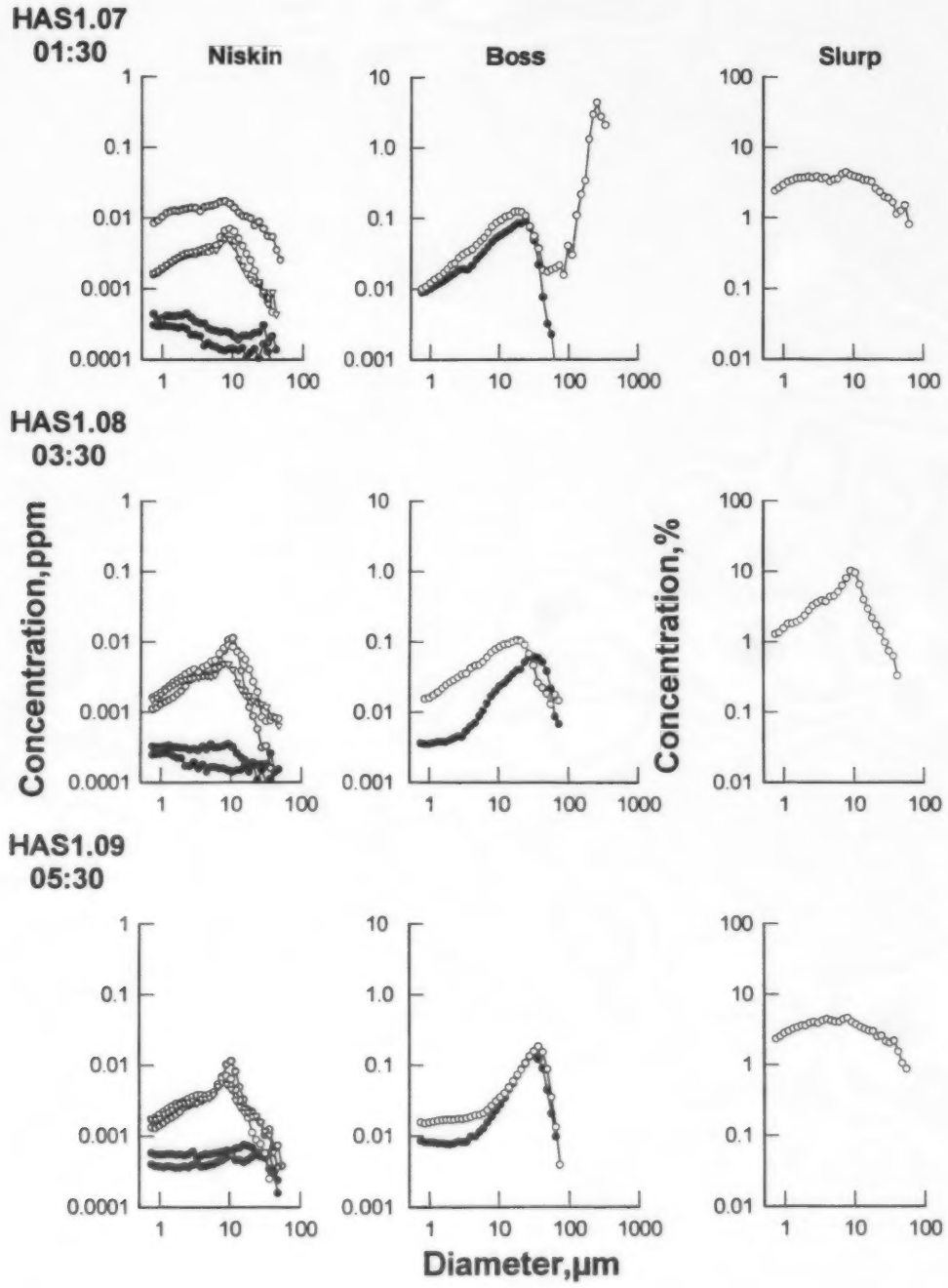


Figure 15. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles. For the BOSS samples the black circles are used for the 0.35-0.50 m above bottom sample and open circles are used for the 0.05-0.25 m sample.

Table 40. Inorganic size spectra, raw data: Station HAS1.10.

| Station | HAS1.10 | HAS1.10 | HAS1.10 | HAS1.10 | HAS1.10 | HAS1.10 | HAS1.10 | HAS1.10 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 82 | (0.35-0.50) | (0.05-0.25) | 82 |
| Time GMT | 720 | 720 | 720 | 720 | 732 | 746 | 746 | 705 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 1.03 | 0.87 | 0.72 | 0.94 | 2.94 | 4.18 | 144.08 | 13.55 |
| Total PPM | 0.01178 | 0.00273 | 0.11063 | 0.09040 | 0.12456 | 1.60245 | 51.55055 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00053 | 0.00008 | 0.00141 | 0.00150 | 0.00240 | 0.01244 | 0.01487 | 2.82 |
| 0.87 | 0.00050 | 0.00008 | 0.00149 | 0.00161 | 0.00247 | 0.01260 | 0.01629 | 2.76 |
| 1.00 | 0.00049 | 0.00009 | 0.00165 | 0.00185 | 0.00269 | 0.01443 | 0.01817 | 3.01 |
| 1.15 | 0.00048 | 0.00010 | 0.00184 | 0.00205 | 0.00286 | 0.01781 | 0.02032 | 3.27 |
| 1.32 | 0.00047 | 0.00010 | 0.00202 | 0.00226 | 0.00314 | 0.01618 | 0.02224 | 3.39 |
| 1.52 | 0.00046 | 0.00010 | 0.00222 | 0.00246 | 0.00340 | 0.01484 | 0.02492 | 3.57 |
| 1.74 | 0.00044 | 0.00009 | 0.00242 | 0.00266 | 0.00359 | 0.01546 | 0.02764 | 3.64 |
| 2.00 | 0.00044 | 0.00009 | 0.00273 | 0.00288 | 0.00389 | 0.01650 | 0.03063 | 3.80 |
| 2.30 | 0.00044 | 0.00010 | 0.00301 | 0.00311 | 0.00414 | 0.01751 | 0.03371 | 3.73 |
| 2.64 | 0.00038 | 0.00008 | 0.00339 | 0.00327 | 0.00429 | 0.01893 | 0.03734 | 3.82 |
| 3.03 | 0.00034 | 0.00010 | 0.00362 | 0.00337 | 0.00459 | 0.02756 | 0.04071 | 4.05 |
| 3.48 | 0.00034 | 0.00008 | 0.00351 | 0.00319 | 0.00493 | 0.04358 | 0.04277 | 4.01 |
| 4.00 | 0.00038 | 0.00008 | 0.00385 | 0.00365 | 0.00509 | 0.03654 | 0.05152 | 3.94 |
| 4.59 | 0.00033 | 0.00010 | 0.00389 | 0.00383 | 0.00497 | 0.02456 | 0.05448 | 3.90 |
| 5.28 | 0.00035 | 0.00009 | 0.00421 | 0.00375 | 0.00495 | 0.02459 | 0.06583 | 3.72 |
| 6.06 | 0.00038 | 0.00009 | 0.00494 | 0.00419 | 0.00545 | 0.02819 | 0.07814 | 3.83 |
| 6.96 | 0.00038 | 0.00009 | 0.00631 | 0.00558 | 0.00684 | 0.03209 | 0.09378 | 4.20 |
| 8.00 | 0.00039 | 0.00009 | 0.00843 | 0.00679 | 0.00805 | 0.03725 | 0.11102 | 4.30 |
| 9.19 | 0.00041 | 0.00009 | 0.01147 | 0.00731 | 0.00864 | 0.04244 | 0.12757 | 3.96 |
| 10.56 | 0.00041 | 0.00009 | 0.01228 | 0.00684 | 0.00831 | 0.04798 | 0.13891 | 3.70 |
| 12.13 | 0.00042 | 0.00010 | 0.00909 | 0.00538 | 0.00686 | 0.05359 | 0.15015 | 3.39 |
| 13.93 | 0.00036 | 0.00010 | 0.00580 | 0.00440 | 0.00606 | 0.06036 | 0.15625 | 3.29 |
| 16.00 | 0.00042 | 0.00009 | 0.00374 | 0.00329 | 0.00547 | 0.06853 | 0.16506 | 3.36 |
| 18.38 | 0.00038 | 0.00009 | 0.00247 | 0.00235 | 0.00460 | 0.07743 | 0.15771 | 2.85 |
| 21.11 | 0.00040 | 0.00007 | 0.00154 | 0.00132 | 0.00302 | 0.08634 | 0.15003 | 2.66 |
| 24.25 | 0.00040 | 0.00006 | 0.00092 | 0.00081 | 0.00199 | 0.10016 | 0.13484 | 2.60 |
| 27.86 | 0.00030 | 0.00013 | 0.00076 | 0.00042 | 0.00090 | 0.11673 | 0.11040 | 2.21 |
| 32.00 | 0.00031 | 0.00008 | 0.00072 | 0.00028 | 0.00061 | 0.13397 | 0.09082 | 1.85 |
| 36.76 | 0.00022 | 0.00009 | 0.00056 | .. | 0.00037 | 0.14300 | 0.06042 | 1.73 |
| 42.22 | 0.00013 | 0.00008 | 0.00033 | .. | .. | 0.12472 | 0.04768 | 1.40 |
| 48.50 | 0.00010 | 0.00005 | .. | .. | .. | 0.08961 | 0.05346 | 0.96 |
| 55.72 | .. | .. | .. | .. | .. | 0.03538 | 0.04709 | 0.30 |
| 64.00 | .. | .. | .. | .. | .. | 0.01114 | 0.04815 | .. |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.07641 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | 0.08015 | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | 0.08954 | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | 0.13454 | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | 0.21000 | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | 0.28549 | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | 0.79258 | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | 2.19490 | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | 7.12157 | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | 11.97273 | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | 12.44631 | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | 8.65674 | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | 3.55457 | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | 1.51209 | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 41. Inorganic size spectra, raw data: Station HAS1.11.

| Station | HAS1.11 | HAS1.11 | HAS1.11 | HAS1.11 | HAS1.11 | HAS1.11 | HAS1.11 | HAS1.11 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 82 | (0.35-0.50) | (0.05-0.25) | 82 |
| Time GMT | 919 | 919 | 919 | 919 | 932 | 944 | 944 | 804 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 1.07 | 0.81 | 0.83 | 0.78 | 1.29 | 3.93 | 227.01 | 8.12 |
| Total PPM | 0.01094 | 0.01062 | 0.04358 | 0.08286 | 0.10590 | 1.29466 | 92.27781 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00059 | 0.00047 | 0.00088 | 0.00138 | 0.00181 | 0.00861 | 0.01677 | 2.14 |
| 0.87 | 0.00055 | 0.00046 | 0.00088 | 0.00149 | 0.00195 | 0.00837 | 0.01792 | 2.38 |
| 1.00 | 0.00051 | 0.00046 | 0.00091 | 0.00171 | 0.00220 | 0.00843 | 0.01983 | 2.67 |
| 1.15 | 0.00049 | 0.00047 | 0.00096 | 0.00192 | 0.00244 | 0.00847 | 0.02177 | 2.80 |
| 1.32 | 0.00048 | 0.00046 | 0.00098 | 0.00214 | 0.00273 | 0.00840 | 0.02391 | 3.06 |
| 1.52 | 0.00043 | 0.00046 | 0.00103 | 0.00238 | 0.00306 | 0.00832 | 0.02619 | 3.25 |
| 1.74 | 0.00041 | 0.00046 | 0.00107 | 0.00261 | 0.00334 | 0.00839 | 0.02796 | 3.32 |
| 2.00 | 0.00041 | 0.00046 | 0.00112 | 0.00287 | 0.00363 | 0.00837 | 0.03192 | 3.54 |
| 2.30 | 0.00041 | 0.00043 | 0.00123 | 0.00307 | 0.00396 | 0.00845 | 0.03690 | 3.63 |
| 2.64 | 0.00033 | 0.00047 | 0.00132 | 0.00330 | 0.00446 | 0.00905 | 0.03884 | 3.79 |
| 3.03 | 0.00035 | 0.00041 | 0.00161 | 0.00344 | 0.00451 | 0.00916 | 0.04409 | 3.54 |
| 3.48 | 0.00032 | 0.00042 | 0.00146 | 0.00348 | 0.00500 | 0.00907 | 0.04434 | 3.57 |
| 4.00 | 0.00031 | 0.00031 | 0.00165 | 0.00367 | 0.00504 | 0.01167 | 0.05265 | 3.56 |
| 4.59 | 0.00030 | 0.00034 | 0.00168 | 0.00360 | 0.00534 | 0.01174 | 0.05802 | 3.41 |
| 5.28 | 0.00029 | 0.00037 | 0.00175 | 0.00401 | 0.00518 | 0.01403 | 0.06232 | 3.97 |
| 6.06 | 0.00029 | 0.00035 | 0.00207 | 0.00447 | 0.00560 | 0.01669 | 0.06901 | 4.16 |
| 6.96 | 0.00030 | 0.00035 | 0.00261 | 0.00578 | 0.00686 | 0.02110 | 0.07852 | 5.01 |
| 8.00 | 0.00028 | 0.00032 | 0.00336 | 0.00687 | 0.00749 | 0.02789 | 0.09370 | 5.15 |
| 9.19 | 0.00031 | 0.00032 | 0.00415 | 0.00714 | 0.00751 | 0.03621 | 0.10543 | 4.63 |
| 10.56 | 0.00031 | 0.00032 | 0.00430 | 0.00600 | 0.00658 | 0.04586 | 0.11252 | 4.02 |
| 12.13 | 0.00035 | 0.00028 | 0.00296 | 0.00386 | 0.00448 | 0.05786 | 0.12140 | 3.56 |
| 13.93 | 0.00036 | 0.00030 | 0.00165 | 0.00251 | 0.00299 | 0.07055 | 0.12793 | 3.41 |
| 16.00 | 0.00032 | 0.00031 | 0.00104 | 0.00157 | 0.00223 | 0.08684 | 0.13363 | 3.18 |
| 18.38 | 0.00037 | 0.00028 | 0.00072 | 0.00120 | 0.00182 | 0.10367 | 0.12439 | 2.79 |
| 21.11 | 0.00041 | 0.00021 | 0.00059 | 0.00089 | 0.00158 | 0.12655 | 0.12762 | 2.73 |
| 24.25 | 0.00036 | 0.00022 | 0.00051 | 0.00071 | 0.00113 | 0.14160 | 0.11033 | 2.29 |
| 27.86 | 0.00027 | 0.00022 | 0.00036 | 0.00054 | 0.00109 | 0.14535 | 0.10084 | 2.24 |
| 32.00 | 0.00038 | 0.00026 | 0.00036 | 0.00026 | 0.00077 | 0.12728 | 0.07102 | 1.93 |
| 36.76 | 0.00022 | 0.00026 | 0.00022 | .. | 0.00072 | 0.08243 | 0.05117 | 1.34 |
| 42.22 | 0.00016 | 0.00010 | 0.00016 | .. | 0.00041 | 0.04709 | 0.04557 | 1.82 |
| 48.50 | 0.00009 | 0.00009 | .. | .. | .. | 0.01275 | 0.04031 | 1.05 |
| 55.72 | .. | .. | .. | .. | .. | 0.00440 | 0.05058 | 1.12 |
| 64.00 | .. | .. | .. | .. | .. | .. | 0.05154 | 0.90 |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.06495 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | 0.10950 | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | 0.16371 | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | 0.23755 | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | 0.26490 | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | 0.66362 | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | 1.43437 | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | 4.12462 | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | 13.08315 | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | 22.40963 | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | 22.83535 | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | 16.43405 | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | 4.97996 | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | 3.33350 | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 42. Inorganic size spectra, raw data: Station HAS1.12.

| Station | HAS1.12 | HAS1.12 | HAS1.12 | HAS1.12 | HAS1.12 | HAS1.12 | HAS1.12 | HAS1.12 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 82 | (0.35-0.50) | (0.05-0.25) | 82 |
| Time GMT | 1121 | 1121 | 1121 | 1121 | 1133 | 1145 | 1145 | 1102 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.88 | 0.99 | 0.61 | 1.35 | 13.55 | 3.73 | 100.54 | 5.24 |
| Total PPM | 0.00782 | 0.00580 | 0.02505 | 0.10725 | 0.12650 | 1.04228 | 2.93586 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00057 | 0.00035 | 0.00034 | 0.00169 | 0.00197 | 0.00641 | 0.01596 | 2.16 |
| 0.87 | 0.00053 | 0.00034 | 0.00036 | 0.00176 | 0.00215 | 0.00638 | 0.01773 | 2.32 |
| 1.00 | 0.00050 | 0.00033 | 0.00038 | 0.00192 | 0.00240 | 0.00663 | 0.01988 | 2.55 |
| 1.15 | 0.00047 | 0.00032 | 0.00042 | 0.00211 | 0.00271 | 0.00686 | 0.02267 | 2.79 |
| 1.32 | 0.00043 | 0.00028 | 0.00044 | 0.00228 | 0.00304 | 0.00703 | 0.02620 | 2.92 |
| 1.52 | 0.00038 | 0.00026 | 0.00047 | 0.00247 | 0.00339 | 0.00749 | 0.02915 | 3.10 |
| 1.74 | 0.00034 | 0.00024 | 0.00052 | 0.00268 | 0.00369 | 0.00777 | 0.03279 | 3.17 |
| 2.00 | 0.00032 | 0.00021 | 0.00056 | 0.00289 | 0.00408 | 0.00817 | 0.03738 | 3.25 |
| 2.30 | 0.00031 | 0.00022 | 0.00064 | 0.00310 | 0.00441 | 0.00886 | 0.04108 | 3.42 |
| 2.64 | 0.00030 | 0.00019 | 0.00070 | 0.00334 | 0.00481 | 0.00948 | 0.04659 | 3.36 |
| 3.03 | 0.00025 | 0.00017 | 0.00080 | 0.00373 | 0.00499 | 0.01039 | 0.05173 | 3.46 |
| 3.48 | 0.00023 | 0.00014 | 0.00080 | 0.00375 | 0.00525 | 0.01106 | 0.05565 | 3.65 |
| 4.00 | 0.00020 | 0.00015 | 0.00087 | 0.00402 | 0.00540 | 0.01256 | 0.06340 | 3.65 |
| 4.59 | 0.00018 | 0.00016 | 0.00094 | 0.00406 | 0.00541 | 0.01557 | 0.07107 | 3.09 |
| 5.28 | 0.00019 | 0.00016 | 0.00106 | 0.00443 | 0.00555 | 0.01690 | 0.07684 | 3.33 |
| 6.06 | 0.00018 | 0.00016 | 0.00127 | 0.00491 | 0.00625 | 0.01970 | 0.08848 | 4.31 |
| 6.96 | 0.00019 | 0.00015 | 0.00159 | 0.00618 | 0.00786 | 0.02396 | 0.10344 | 4.74 |
| 8.00 | 0.00018 | 0.00017 | 0.00189 | 0.00810 | 0.00921 | 0.02991 | 0.12425 | 4.92 |
| 9.19 | 0.00018 | 0.00014 | 0.00221 | 0.01028 | 0.00970 | 0.03493 | 0.13861 | 4.59 |
| 10.56 | 0.00018 | 0.00014 | 0.00210 | 0.00972 | 0.00853 | 0.03901 | 0.15044 | 4.19 |
| 12.13 | 0.00019 | 0.00015 | 0.00172 | 0.00693 | 0.00586 | 0.04216 | 0.16494 | 3.78 |
| 13.93 | 0.00020 | 0.00015 | 0.00142 | 0.00520 | 0.00396 | 0.04822 | 0.16947 | 3.47 |
| 16.00 | 0.00027 | 0.00020 | 0.00120 | 0.00393 | 0.00294 | 0.05644 | 0.17172 | 3.12 |
| 18.38 | 0.00021 | 0.00015 | 0.00095 | 0.00309 | 0.00264 | 0.06401 | 0.16897 | 2.79 |
| 21.11 | 0.00023 | 0.00015 | 0.00066 | 0.00170 | 0.00228 | 0.07328 | 0.13053 | 2.47 |
| 24.25 | 0.00016 | 0.00019 | 0.00040 | 0.00085 | 0.00197 | 0.08909 | 0.11165 | 2.62 |
| 27.86 | 0.00020 | 0.00018 | 0.00024 | 0.00053 | 0.00183 | 0.09753 | 0.08810 | 2.51 |
| 32.00 | 0.00009 | 0.00018 | 0.00013 | 0.00057 | 0.00124 | 0.10264 | 0.07254 | 1.98 |
| 36.76 | 0.00008 | 0.00012 | .. | 0.00039 | 0.00128 | 0.08906 | 0.06108 | 1.60 |
| 42.22 | 0.00007 | 0.00004 | .. | 0.00027 | 0.00120 | 0.05382 | 0.05589 | 1.55 |
| 48.50 | .. | .. | .. | 0.00020 | 0.00051 | 0.02834 | 0.05657 | 2.37 |
| 55.72 | .. | .. | .. | 0.00016 | .. | 0.00863 | 0.05534 | 1.75 |
| 64.00 | .. | .. | .. | .. | .. | .. | 0.06729 | 1.01 |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.08657 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | 0.13520 | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | 0.10361 | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | 0.02305 | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

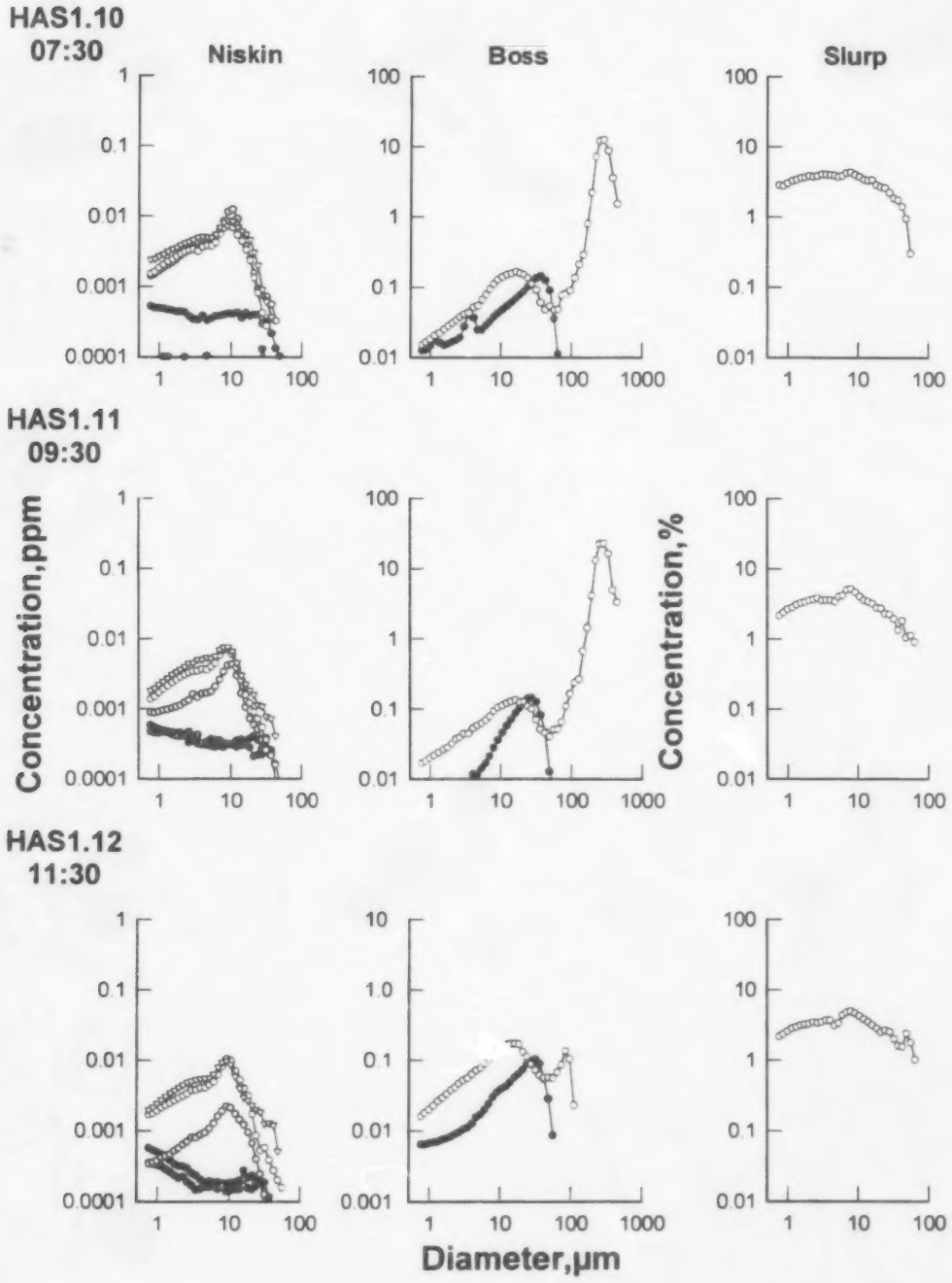


Figure 16. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles. For the BOSS samples the black circles are used for the 0.35-0.50 m above bottom sample and open circles are used for the 0.05-0.25 m sample.

Table 43. Inorganic size spectra, raw data: Station HAS1.13.

| Station | HAS1.13 | HAS1.13 | HAS1.13 | HAS1.13 | HAS1.13 | HAS1.13 | HAS1.13 | HAS1.13 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 81 | (0.35-0.50) | (0.05-0.25) | 81 |
| Time GMT | 1328 | 1328 | 1328 | 1328 | 1338 | 1352 | 1352 | 1305 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.36 | 0.44 | 0.51 | 1.77 | 2.08 | 2.74 | 6.10 | 8.38 |
| Total PPM | 0.00468 | 0.01081 | 0.05606 | 0.10207 | 0.17260 | 0.90439 | 1.01675 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00017 | 0.00042 | 0.00082 | 0 00172 | 0.00222 | 0.01376 | 0.00682 | 2.60 |
| 0.87 | 0.00018 | 0.00042 | 0.00077 | 0.00185 | 0.00231 | 0.01251 | 0.00680 | 2.80 |
| 1.00 | 0.00019 | 0.00043 | 0.00080 | 0.00205 | 0.00261 | 0.01069 | 0.00707 | 3.06 |
| 1.15 | 0.00021 | 0.00046 | 0.00085 | 0.00229 | 0.00286 | 0.00731 | 0.00719 | 3.25 |
| 1.32 | 0.00022 | 0.00048 | 0.00091 | 0.00250 | 0.00304 | 0.00586 | 0.00737 | 3.47 |
| 1.52 | 0.00023 | 0.00048 | 0.00095 | 0.00274 | 0.00331 | 0.00580 | 0.00750 | 3.58 |
| 1.74 | 0.00024 | 0.00047 | 0.00100 | 0.00294 | 0.00360 | 0.00579 | 0.00775 | 3.72 |
| 2.00 | 0.00025 | 0.00046 | 0.00109 | 0.00323 | 0.00399 | 0.00558 | 0.00771 | 3.96 |
| 2.30 | 0.00026 | 0.00047 | 0.00121 | 0.00348 | 0.00438 | 0.00574 | 0.00802 | 3.93 |
| 2.64 | 0.00023 | 0.00041 | 0.00140 | 0.00384 | 0.00476 | 0.00573 | 0.00820 | 4.03 |
| 3.03 | 0.00023 | 0.00040 | 0.00152 | 0.00399 | 0.00488 | 0.00597 | 0.00868 | 3.82 |
| 3.48 | 0.00023 | 0.00044 | 0.00146 | 0.00358 | 0.00541 | 0.00692 | 0.00940 | 3.87 |
| 4.00 | 0.00022 | 0.00036 | 0.00163 | 0.00424 | 0.00595 | 0.00703 | 0.01008 | 4.21 |
| 4.59 | 0.00021 | 0.00035 | 0.00184 | 0.00453 | 0.00644 | 0.00826 | 0.01054 | 4.15 |
| 5.28 | 0.00017 | 0.00035 | 0.00202 | 0.00453 | 0.00667 | 0.00895 | 0.01286 | 4.10 |
| 6.06 | 0.00015 | 0.00037 | 0.00249 | 0.00494 | 0.00754 | 0.01073 | 0.01457 | 4.14 |
| 6.96 | 0.00013 | 0.00037 | 0.00318 | 0.00641 | 0.00961 | 0.01326 | 0.01739 | 4.59 |
| 8.00 | 0.00012 | 0.00037 | 0.00402 | 0.00818 | 0.01190 | 0.01738 | 0.02155 | 4.85 |
| 9.19 | 0.00012 | 0.00036 | 0.00492 | 0.00993 | 0.01356 | 0.02191 | 0.02545 | 4.40 |
| 10.56 | 0.00011 | 0.00037 | 0.00483 | 0.00954 | 0.01316 | 0.02706 | 0.02947 | 3.89 |
| 12.13 | 0.00011 | 0.00032 | 0.00413 | 0.00613 | 0.01149 | 0.03531 | 0.03422 | 3.20 |
| 13.93 | 0.00012 | 0.00033 | 0.00355 | 0.00353 | 0.01113 | 0.04583 | 0.03927 | 2.96 |
| 16.00 | 0.00012 | 0.00029 | 0.00301 | 0.00208 | 0.01011 | 0.05596 | 0.04641 | 2.85 |
| 18.38 | 0.00017 | 0.00022 | 0.00245 | 0.00130 | 0.00783 | 0.06622 | 0.05388 | 2.60 |
| 21.11 | 0.00010 | 0.00027 | 0.00220 | 0.00085 | 0.00475 | 0.06821 | 0.06321 | 2.22 |
| 24.25 | 0.00012 | 0.00025 | 0.00118 | 0.00067 | 0.00234 | 0.08530 | 0.07186 | 2.02 |
| 27.86 | 0.00007 | 0.00029 | 0.00082 | 0.00045 | 0.00089 | 0.08890 | 0.08356 | 1.91 |
| 32.00 | .. | 0.00019 | 0.00044 | 0.00032 | 0.00072 | 0.09584 | 0.08878 | 1.58 |
| 36.76 | .. | 0.00032 | 0.00030 | 0.00023 | 0.00089 | 0.07952 | 0.08425 | 1.18 |
| 42.22 | .. | 0.00011 | 0.00028 | .. | 0.00144 | 0.05184 | 0.07668 | 0.69 |
| 48.50 | .. | .. | .. | .. | 0.00133 | 0.01882 | 0.06224 | 1.14 |
| 55.72 | .. | .. | .. | .. | 0.00147 | 0.00640 | 0.03889 | 0.74 |
| 64.00 | .. | .. | .. | .. | .. | .. | 0.02775 | 0.50 |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.00758 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | 0.00376 | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 44. Inorganic size spectra, raw data: Station HAS2.01.

| Station | HAS2.01 | HAS2.01 | HAS2.01 | HAS2.01 | HAS2.01 | HAS2.01 | HAS2.01 | HAS2.01 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 80 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Time GMT | 1921 | 1921 | 1921 | 1921 | 1932 | 2003 | 2003 | 1903 |
| Total SPM | 1.10 | 0.91 | 0.51 | 0.92 | 2.23 | 177.64 | 783.03 | 134.03 |
| Total PPM | 0.00613 | 0.00603 | 0.01535 | 0.03541 | 0.33679 | 33.55072 | 196.42329 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00030 | 0.00027 | 0.00046 | 0.00083 | 0.00431 | 0.00804 | 0.02080 | 1.39 |
| 0.87 | 0.00027 | 0.00026 | 0.00049 | 0.00086 | 0.00438 | 0.00862 | 0.02272 | 1.50 |
| 1.00 | 0.00026 | 0.00025 | 0.00054 | 0.00094 | 0.00468 | 0.01016 | 0.02556 | 1.65 |
| 1.15 | 0.00026 | 0.00023 | 0.00060 | 0.00103 | 0.00509 | 0.01119 | 0.02907 | 1.83 |
| 1.32 | 0.00023 | 0.00022 | 0.00065 | 0.00110 | 0.00554 | 0.01149 | 0.03283 | 2.03 |
| 1.52 | 0.00022 | 0.00019 | 0.00067 | 0.00121 | 0.00595 | 0.01254 | 0.03636 | 2.14 |
| 1.74 | 0.00021 | 0.00017 | 0.00072 | 0.00128 | 0.00646 | 0.01315 | 0.03977 | 2.32 |
| 2.00 | 0.00021 | 0.00017 | 0.00077 | 0.00133 | 0.00689 | 0.01441 | 0.04373 | 2.41 |
| 2.30 | 0.00020 | 0.00016 | 0.00082 | 0.00142 | 0.00729 | 0.01553 | 0.04603 | 2.54 |
| 2.64 | 0.00018 | 0.00015 | 0.00083 | 0.00138 | 0.00770 | 0.01698 | 0.05204 | 2.67 |
| 3.03 | 0.00017 | 0.00014 | 0.00085 | 0.00141 | 0.00834 | 0.01766 | 0.05906 | 2.71 |
| 3.48 | 0.00018 | 0.00013 | 0.00080 | 0.00142 | 0.00783 | 0.01891 | 0.05985 | 2.82 |
| 4.00 | 0.00013 | 0.00012 | 0.00077 | 0.00132 | 0.00938 | 0.02316 | 0.06721 | 3.03 |
| 4.59 | 0.00013 | 0.00012 | 0.00069 | 0.00130 | 0.00941 | 0.02765 | 0.06814 | 3.03 |
| 5.28 | 0.00016 | 0.00015 | 0.00063 | 0.00136 | 0.01005 | 0.02909 | 0.07420 | 3.07 |
| 6.06 | 0.00018 | 0.00017 | 0.00071 | 0.00194 | 0.01067 | 0.03173 | 0.07941 | 3.33 |
| 6.96 | 0.00020 | 0.00017 | 0.00096 | 0.00276 | 0.01189 | 0.03569 | 0.09044 | 3.95 |
| 8.00 | 0.00021 | 0.00020 | 0.00090 | 0.00306 | 0.01288 | 0.04071 | 0.10549 | 4.32 |
| 9.19 | 0.00023 | 0.00025 | 0.00071 | 0.00258 | 0.01314 | 0.04432 | 0.10604 | 4.22 |
| 10.56 | 0.00026 | 0.00024 | 0.00046 | 0.00181 | 0.01305 | 0.04796 | 0.10579 | 4.26 |
| 12.13 | 0.00023 | 0.00027 | 0.00028 | 0.00116 | 0.01305 | 0.05000 | 0.10629 | 4.29 |
| 13.93 | 0.00024 | 0.00027 | 0.00025 | 0.00098 | 0.01355 | 0.05459 | 0.10174 | 4.50 |
| 16.00 | 0.00028 | 0.00033 | 0.00022 | 0.00082 | 0.01476 | 0.05544 | 0.09420 | 4.56 |
| 18.38 | 0.00024 | 0.00036 | 0.00018 | 0.00075 | 0.01638 | 0.05593 | 0.08533 | 4.64 |
| 21.11 | 0.00020 | 0.00030 | 0.00019 | 0.00062 | 0.01797 | 0.06470 | 0.07842 | 4.61 |
| 24.25 | 0.00018 | 0.00021 | 0.00013 | 0.00039 | 0.01986 | 0.06134 | 0.06280 | 4.25 |
| 27.86 | 0.00019 | 0.00032 | 0.00008 | 0.00024 | 0.01828 | 0.06139 | 0.04058 | 4.03 |
| 32.00 | 0.00018 | 0.00016 | .. | 0.00012 | 0.01770 | 0.05405 | 0.03560 | 3.72 |
| 36.76 | 0.00013 | 0.00006 | .. | .. | 0.01468 | 0.05930 | 0.03883 | 3.54 |
| 42.22 | 0.00008 | .. | .. | .. | 0.00939 | 0.04779 | 0.05290 | 2.61 |
| 48.50 | .. | .. | .. | .. | 0.00727 | 0.03740 | 0.10187 | 2.01 |
| 55.72 | .. | .. | .. | .. | 0.00548 | 0.03534 | 0.12578 | 1.32 |
| 64.00 | .. | .. | .. | .. | 0.00351 | 0.05618 | 0.17938 | 0.69 |
| 73.52 | .. | .. | .. | .. | .. | 0.06015 | 0.23768 | .. |
| 84.45 | .. | .. | .. | .. | .. | 0.06503 | 0.32132 | .. |
| 97.01 | .. | .. | .. | .. | .. | 0.07504 | 0.43555 | .. |
| 111.43 | .. | .. | .. | .. | .. | 0.07822 | 0.54771 | .. |
| 128.00 | .. | .. | .. | .. | .. | 0.14837 | 0.86764 | .. |
| 147.03 | .. | .. | .. | .. | .. | 0.27476 | 1.60828 | .. |
| 168.90 | .. | .. | .. | .. | .. | 0.65683 | 5.03748 | .. |
| 194.01 | .. | .. | .. | .. | .. | 2.23946 | 15.12433 | .. |
| 222.86 | .. | .. | .. | .. | .. | 5.25006 | 36.08292 | .. |
| 256.00 | .. | .. | .. | .. | .. | 6.79697 | 48.42177 | .. |
| 294.07 | .. | .. | .. | .. | .. | 7.73210 | 38.10550 | .. |
| 337.79 | .. | .. | .. | .. | .. | 4.71551 | 28.46537 | .. |
| 388.02 | .. | .. | .. | .. | .. | 3.07427 | 13.55438 | .. |
| 445.72 | .. | .. | .. | .. | .. | 0.78826 | 5.34510 | .. |
| 512.00 | .. | .. | .. | .. | .. | 0.46326 | .. | .. |

Table 45. Inorganic size spectra, raw data: Station HAS2.02.

| Station | HAS2.02 | HAS2.02 | HAS2.02 | HAS2.02 | HAS2.02 | HAS2.02 | HAS2.02 | HAS2.02 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | |
| Time GMT | 2125 | 2125 | 2125 | 2125 | 2141 | 2155 | 2155 | |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.78 | 2.12 | 0.41 | 2.44 | 1.65 | 67.82 | 147.39 | .. |
| Total PPM | 0.01109 | 0.01440 | 0.01218 | 0.05221 | 0.05177 | 76.77394 | 50.30232 | .. |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00051 | 0.00062 | 0.00035 | 0.00085 | 0.00122 | 0.00510 | 0.01136 | .. |
| 0.87 | 0.00051 | 0.00063 | 0.00038 | 0.00090 | 0.00133 | 0.00532 | 0.01238 | .. |
| 1.00 | 0.00054 | 0.00066 | 0.00040 | 0.00101 | 0.00150 | 0.00586 | 0.01413 | .. |
| 1.15 | 0.00056 | 0.00069 | 0.00043 | 0.00112 | 0.00166 | 0.00645 | 0.01556 | .. |
| 1.32 | 0.00055 | 0.00071 | 0.00047 | 0.00123 | 0.00183 | 0.00697 | 0.01766 | .. |
| 1.52 | 0.00056 | 0.00077 | 0.00048 | 0.00134 | 0.00201 | 0.00775 | 0.01957 | .. |
| 1.74 | 0.00057 | 0.00076 | 0.00053 | 0.00144 | 0.00213 | 0.00810 | 0.02262 | .. |
| 2.00 | 0.00054 | 0.00076 | 0.00053 | 0.00153 | 0.00228 | 0.00895 | 0.02549 | .. |
| 2.30 | 0.00056 | 0.00079 | 0.00057 | 0.00160 | 0.00242 | 0.00999 | 0.02928 | .. |
| 2.64 | 0.00052 | 0.00075 | 0.00062 | 0.00159 | 0.00245 | 0.01116 | 0.03207 | .. |
| 3.03 | 0.00050 | 0.00074 | 0.00065 | 0.00171 | 0.00239 | 0.01238 | 0.03364 | .. |
| 3.48 | 0.00046 | 0.00072 | 0.00077 | 0.00177 | 0.00220 | 0.01391 | 0.03344 | .. |
| 4.00 | 0.00039 | 0.00072 | 0.00068 | 0.00196 | 0.00228 | 0.01640 | 0.04257 | .. |
| 4.59 | 0.00039 | 0.00058 | 0.00076 | 0.00200 | 0.00211 | 0.01781 | 0.04693 | .. |
| 5.28 | 0.00038 | 0.00047 | 0.00072 | 0.00230 | 0.00225 | 0.02141 | 0.05146 | .. |
| 6.06 | 0.00035 | 0.00046 | 0.00068 | 0.00266 | 0.00239 | 0.02177 | 0.05642 | .. |
| 6.96 | 0.00034 | 0.00044 | 0.00066 | 0.00371 | 0.00320 | 0.02522 | 0.06454 | .. |
| 8.00 | 0.00034 | 0.00038 | 0.00053 | 0.00458 | 0.00353 | 0.02885 | 0.07545 | .. |
| 9.19 | 0.00033 | 0.00035 | 0.00042 | 0.00493 | 0.00337 | 0.03050 | 0.08092 | .. |
| 10.56 | 0.00031 | 0.00032 | 0.00032 | 0.00441 | 0.00258 | 0.03120 | 0.08390 | .. |
| 12.13 | 0.00026 | 0.00030 | 0.00022 | 0.00326 | 0.00160 | 0.03253 | 0.08371 | .. |
| 13.93 | 0.00029 | 0.00024 | 0.00020 | 0.00242 | 0.00117 | 0.03489 | 0.08370 | .. |
| 16.00 | 0.00026 | 0.00026 | 0.00017 | 0.00177 | 0.00102 | 0.03649 | 0.08104 | .. |
| 18.38 | 0.00022 | 0.00020 | 0.00012 | 0.00095 | 0.00079 | 0.03909 | 0.07728 | .. |
| 21.11 | 0.00019 | 0.00015 | 0.00017 | 0.00054 | 0.00069 | 0.03652 | 0.06740 | .. |
| 24.25 | 0.00021 | 0.00020 | 0.00012 | 0.00036 | 0.00049 | 0.03577 | 0.05071 | .. |
| 27.86 | 0.00019 | 0.00019 | 0.00015 | 0.00026 | 0.00042 | 0.02676 | 0.03781 | .. |
| 32.00 | 0.00015 | 0.00019 | 0.00008 | .. | 0.00024 | 0.02789 | 0.02824 | .. |
| 36.76 | 0.00011 | 0.00011 | .. | .. | 0.00015 | 0.02969 | 0.02435 | .. |
| 42.22 | .. | 0.00014 | .. | .. | 0.00008 | 0.03307 | 0.02219 | .. |
| 48.50 | .. | 0.00012 | .. | .. | .. | 0.03754 | 0.02882 | .. |
| 55.72 | .. | .. | .. | .. | .. | 0.04178 | 0.03260 | .. |
| 64.00 | .. | .. | .. | .. | .. | 0.06378 | 0.03917 | .. |
| 73.52 | .. | .. | .. | .. | .. | 0.10859 | 0.05113 | .. |
| 84.45 | .. | .. | .. | .. | .. | 0.13799 | 0.06532 | .. |
| 97.01 | .. | .. | .. | .. | .. | 0.26883 | 0.09956 | .. |
| 111.43 | .. | .. | .. | .. | .. | 0.14017 | 0.18801 | .. |
| 128.00 | .. | .. | .. | .. | .. | 0.45369 | 0.14335 | .. |
| 147.03 | .. | .. | .. | .. | .. | 0.83167 | 0.50523 | .. |
| 168.90 | .. | .. | .. | .. | .. | 1.48397 | 1.19310 | .. |
| 194.01 | .. | .. | .. | .. | .. | 6.01473 | 2.86127 | .. |
| 222.86 | .. | .. | .. | .. | .. | 17.32891 | 7.69005 | .. |
| 256.00 | .. | .. | .. | .. | .. | 18.88012 | 9.63197 | .. |
| 294.07 | .. | .. | .. | .. | .. | 17.40460 | 10.99110 | .. |
| 337.79 | .. | .. | .. | .. | .. | 12.94978 | 7.94625 | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | 3.89598 | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | 3.61358 | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

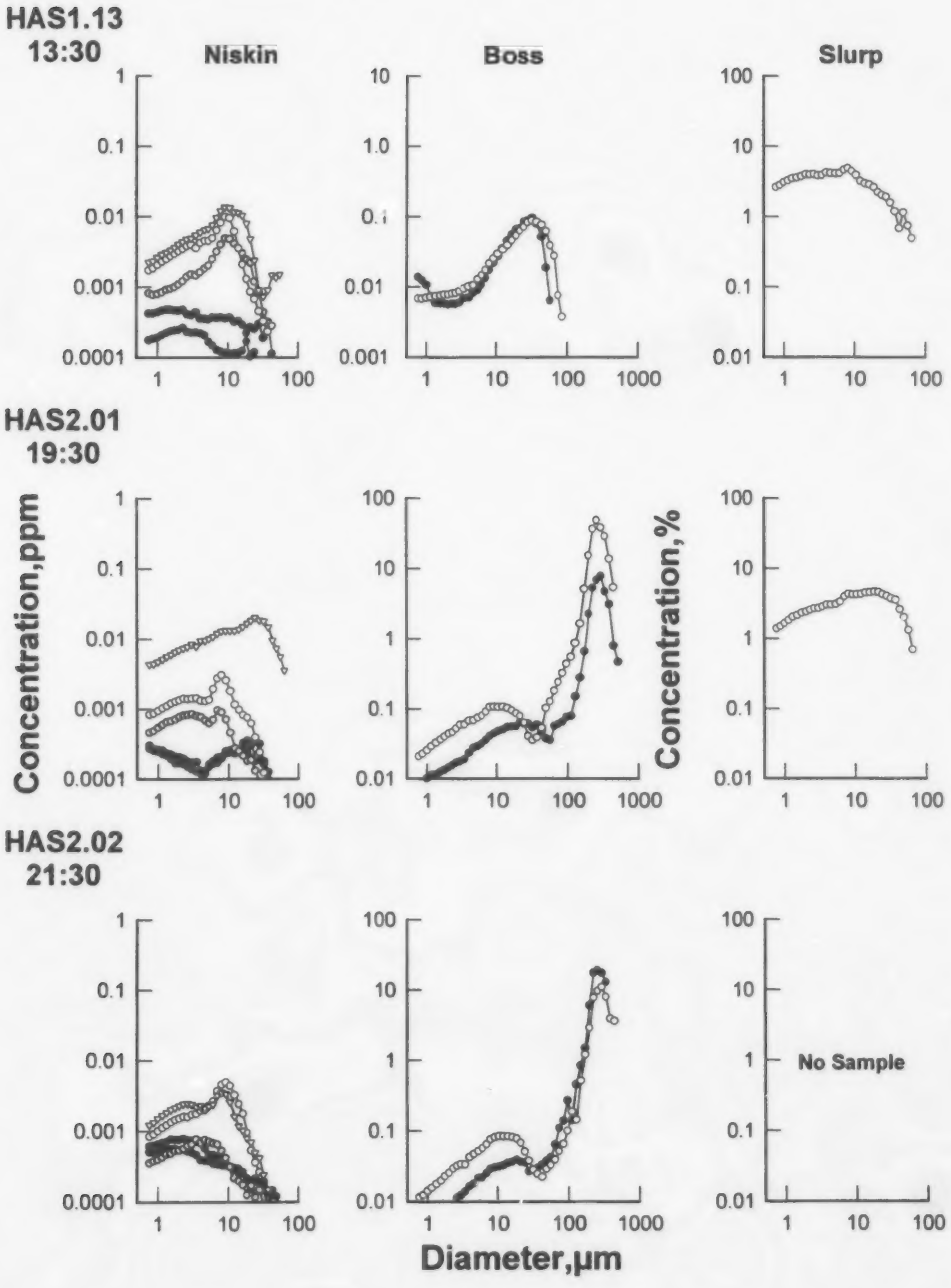


Figure 17. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles. For the BOSS samples the black circles are used for the 0.35-0.50 m above bottom sample and open circles are used for the 0.05-0.25 m sample.

**Table 46. Inorganic size spectra, raw data: Station HAS2.03.**

| Station | HAS2.03 | HAS2.03 | HAS2.03 | HAS2.03 | HAS2.03 | HAS2.03 | HAS2.03 | HAS2.03 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 80 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Time GMT | 2320 | 2320 | 2320 | 2320 | 2334 | 2354 | 2354 | 2306 |
| Total SPM | 1.64 | 0.89 | 0.84 | 1.49 | 1.28 | 5.36 | 19.94 | 5.25 |
| Total PPM | 0.00757 | 0.01185 | 0.01589 | 0.05802 | 0.06414 | 0.50624 | 9.83251 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00032 | 0.00047 | 0.00039 | 0.00120 | 0.00129 | 0.00223 | .. | 1.80 |
| 0.87 | 0.00033 | 0.00049 | 0.00041 | 0.00129 | 0.00141 | 0.00222 | 0.00959 | 1.99 |
| 1.00 | 0.00035 | 0.00052 | 0.00044 | 0.00146 | 0.00158 | 0.00239 | 0.01047 | 2.22 |
| 1.15 | 0.00035 | 0.00056 | 0.00047 | 0.00161 | 0.00179 | 0.00256 | 0.01198 | 2.46 |
| 1.32 | 0.00037 | 0.00058 | 0.00050 | 0.00175 | 0.00193 | 0.00277 | 0.01377 | 2.62 |
| 1.52 | 0.00036 | 0.00060 | 0.00053 | 0.00193 | 0.00215 | 0.00294 | 0.01601 | 2.81 |
| 1.74 | 0.00035 | 0.00060 | 0.00056 | 0.00209 | 0.00229 | 0.00333 | 0.01832 | 2.92 |
| 2.00 | 0.00037 | 0.00064 | 0.00061 | 0.00221 | 0.00236 | 0.00376 | 0.02082 | 3.18 |
| 2.30 | 0.00034 | 0.00063 | 0.00062 | 0.00235 | 0.00257 | 0.00420 | 0.02399 | 3.26 |
| 2.64 | 0.00032 | 0.00060 | 0.00064 | 0.00247 | 0.00253 | 0.00483 | 0.02827 | 3.19 |
| 3.03 | 0.00030 | 0.00062 | 0.00068 | 0.00253 | 0.00268 | 0.00554 | 0.03083 | 3.40 |
| 3.48 | 0.00022 | 0.00067 | 0.00070 | 0.00258 | 0.00235 | 0.00585 | 0.03178 | 3.00 |
| 4.00 | 0.00026 | 0.00055 | 0.00077 | 0.00294 | 0.00273 | 0.00795 | 0.03867 | 3.58 |
| 4.59 | 0.00028 | 0.00054 | 0.00082 | 0.00320 | 0.00261 | 0.00953 | 0.04074 | 3.90 |
| 5.28 | 0.00026 | 0.00046 | 0.00087 | 0.00310 | 0.00246 | 0.01077 | 0.04194 | 3.83 |
| 6.06 | 0.00026 | 0.00041 | 0.00098 | 0.00326 | 0.00256 | 0.01231 | 0.04525 | 4.02 |
| 6.96 | 0.00024 | 0.00038 | 0.00123 | 0.00404 | 0.00328 | 0.01455 | 0.05063 | 4.51 |
| 8.00 | 0.00024 | 0.00033 | 0.00117 | 0.00438 | 0.00386 | 0.01684 | 0.05853 | 4.77 |
| 9.19 | 0.00025 | 0.00029 | 0.00104 | 0.00407 | 0.00404 | 0.01830 | 0.05919 | 4.43 |
| 10.56 | 0.00023 | 0.00026 | 0.00073 | 0.00315 | 0.00331 | 0.01906 | 0.05964 | 4.28 |
| 12.13 | 0.00023 | 0.00026 | 0.00047 | 0.00188 | 0.00223 | 0.02056 | 0.05758 | 4.12 |
| 13.93 | 0.00022 | 0.00021 | 0.00034 | 0.00125 | 0.00182 | 0.02184 | 0.05730 | 4.23 |
| 16.00 | 0.00024 | 0.00021 | 0.00021 | 0.00094 | 0.00160 | 0.02425 | 0.05501 | 4.31 |
| 18.38 | 0.00021 | 0.00015 | 0.00017 | 0.00069 | 0.00131 | 0.02677 | 0.05205 | 4.13 |
| 21.11 | 0.00020 | 0.00014 | 0.00018 | 0.00053 | 0.00130 | 0.02967 | 0.04090 | 3.85 |
| 24.25 | 0.00012 | 0.00020 | 0.00019 | 0.00041 | 0.00130 | 0.03667 | 0.02834 | 3.77 |
| 27.86 | 0.00015 | 0.00019 | 0.00013 | 0.00025 | 0.00134 | 0.04396 | 0.02001 | 2.80 |
| 32.00 | 0.00015 | 0.00015 | .. | 0.00017 | 0.00106 | 0.05001 | 0.01258 | 2.45 |
| 36.76 | 0.00009 | 0.00015 | .. | 0.00018 | 0.00105 | 0.04763 | 0.02023 | 2.07 |
| 42.22 | .. | .. | .. | 0.00011 | 0.00056 | 0.03217 | 0.03038 | 1.56 |
| 48.50 | .. | .. | .. | .. | 0.00046 | 0.01642 | 0.04973 | 0.56 |
| 55.72 | .. | .. | .. | .. | 0.00033 | 0.00435 | 0.09079 | .. |
| 64.00 | .. | .. | .. | .. | .. | .. | 0.11711 | .. |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.22098 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | 0.16855 | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | 0.03675 | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | 0.02706 | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | 0.06707 | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | 0.08885 | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | 0.27788 | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | 0.53024 | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | 1.10897 | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | 1.67421 | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | 1.34526 | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | 1.62738 | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | 1.41691 | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 47. Inorganic size spectra, raw data: Station HAS2.04.

| Station | HAS2.04 | HAS2.04 | HAS2.04 | HAS2.04 | HAS2.04 | HAS2.04 | HAS2.04 | HAS2.04 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 80 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Time GMT | 118 | 118 | 118 | 118 | 132 | 147 | 147 | 100 |
| Total SPM | 1.23 | 1.11 | 0.81 | 3.19 | 1.35 | 4.64 | 303.80 | 47.32 |
| Total PPM | 0.02245 | 0.01704 | 0.02517 | 0.06122 | 0.11668 | 0.62281 | 89.40883 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00085 | 0.00082 | 0.00064 | 0.00117 | 0.00183 | 0.00388 | 0.01160 | 2.11 |
| 0.87 | 0.00089 | 0.00080 | 0.00065 | 0.00126 | 0.00196 | 0.00399 | 0.01293 | 2.35 |
| 1.00 | 0.00094 | 0.00087 | 0.00068 | 0.00138 | 0.00218 | 0.00426 | 0.01512 | 2.70 |
| 1.15 | 0.00100 | 0.00093 | 0.00073 | 0.00151 | 0.00239 | 0.00454 | 0.01688 | 3.09 |
| 1.32 | 0.00102 | 0.00089 | 0.00076 | 0.00170 | 0.00266 | 0.00482 | 0.01884 | 3.46 |
| 1.52 | 0.00105 | 0.00085 | 0.00081 | 0.00183 | 0.00294 | 0.00525 | 0.02143 | 3.78 |
| 1.74 | 0.00106 | 0.00084 | 0.00084 | 0.00198 | 0.00311 | 0.00545 | 0.02334 | 4.14 |
| 2.00 | 0.00102 | 0.00084 | 0.00092 | 0.00205 | 0.00326 | 0.00592 | 0.02626 | 4.29 |
| 2.30 | 0.00099 | 0.00083 | 0.00100 | 0.00216 | 0.00350 | 0.00659 | 0.02846 | 4.49 |
| 2.64 | 0.00094 | 0.00082 | 0.00110 | 0.00219 | 0.00364 | 0.00665 | 0.03285 | 4.67 |
| 3.03 | 0.00085 | 0.00073 | 0.00113 | 0.00234 | 0.00393 | 0.00785 | 0.03485 | 4.76 |
| 3.48 | 0.00092 | 0.00078 | 0.00116 | 0.00238 | 0.00367 | 0.00750 | 0.03270 | 4.29 |
| 4.00 | 0.00085 | 0.00065 | 0.00118 | 0.00266 | 0.00404 | 0.00992 | 0.04355 | 5.13 |
| 4.59 | 0.00078 | 0.00061 | 0.00129 | 0.00274 | 0.00402 | 0.01121 | 0.04837 | 4.57 |
| 5.28 | 0.00073 | 0.00054 | 0.00130 | 0.00283 | 0.00420 | 0.01196 | 0.04976 | 4.26 |
| 6.06 | 0.00071 | 0.00052 | 0.00143 | 0.00321 | 0.00570 | 0.01380 | 0.05366 | 4.33 |
| 6.96 | 0.00075 | 0.00047 | 0.00163 | 0.00420 | 0.00744 | 0.01626 | 0.06235 | 5.93 |
| 8.00 | 0.00074 | 0.00046 | 0.00182 | 0.00490 | 0.00874 | 0.01925 | 0.07298 | 6.52 |
| 9.19 | 0.00072 | 0.00044 | 0.00198 | 0.00523 | 0.00810 | 0.02159 | 0.07413 | 4.89 |
| 10.56 | 0.00065 | 0.00044 | 0.00154 | 0.00437 | 0.00703 | 0.02313 | 0.07225 | 4.03 |
| 12.13 | 0.00067 | 0.00046 | 0.00088 | 0.00304 | 0.00599 | 0.02474 | 0.07134 | 3.29 |
| 13.93 | 0.00068 | 0.00045 | 0.00051 | 0.00217 | 0.00524 | 0.02648 | 0.06773 | 2.64 |
| 16.00 | 0.00061 | 0.00044 | 0.00033 | 0.00150 | 0.00499 | 0.02855 | 0.06570 | 2.34 |
| 18.38 | 0.00055 | 0.00044 | 0.00024 | 0.00107 | 0.00449 | 0.03053 | 0.05890 | 2.09 |
| 21.11 | 0.00058 | 0.00041 | 0.00021 | 0.00059 | 0.00379 | 0.03299 | 0.05290 | 1.80 |
| 24.25 | 0.00055 | 0.00033 | 0.00019 | 0.00048 | 0.00325 | 0.03747 | 0.04352 | 1.37 |
| 27.86 | 0.00056 | 0.00024 | 0.00013 | 0.00029 | 0.00215 | 0.04501 | 0.03331 | 1.08 |
| 32.00 | 0.00043 | 0.00012 | 0.00008 | .. | 0.00127 | 0.04917 | 0.02827 | 0.64 |
| 36.76 | 0.00025 | .. | .. | .. | 0.00085 | 0.05329 | 0.02482 | 0.63 |
| 42.22 | 0.00011 | .. | .. | .. | 0.00030 | 0.04800 | 0.02495 | 0.33 |
| 48.50 | .. | .. | .. | .. | .. | 0.03081 | 0.03194 | .. |
| 55.72 | .. | .. | .. | .. | .. | 0.01523 | 0.04313 | .. |
| 64.00 | .. | .. | .. | .. | .. | 0.00670 | 0.05695 | .. |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.09239 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | 0.14315 | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | 0.16535 | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | 0.19765 | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | 0.35880 | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | 0.86388 | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | 2.44847 | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | 7.44109 | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | 18.24774 | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | 23.03277 | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | 19.29349 | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | 10.13757 | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | 4.47691 | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | 1.15381 | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 48. Inorganic size spectra, raw data: Station HAS2.05.

| Station | HAS2.05 | HAS2.05 | HAS2.05 | HAS2.05 | HAS2.05 | HAS2.05 | HAS2.05 | HAS2.05 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 80 |
| Time GMT | 322 | 322 | 322 | 322 | 341 | 352 | 352 | 300 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.69 | 0.66 | 2.82 | 1.40 | 3.04 | 2.66 | 40.36 | 7.65 |
| Total PPM | 0.01644 | 0.01872 | 0.07738 | 0.06508 | 0.05149 | 0.57334 | 29.02735 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00064 | 0.00074 | 0.00100 | 0.00100 | 0.00111 | 0.00442 | 0.01715 | 1.98 |
| 0.87 | 0.00064 | 0.00073 | 0.00107 | 0.00107 | 0.00120 | 0.00430 | 0.01670 | 2.25 |
| 1.00 | 0.00066 | 0.00076 | 0.00118 | 0.00119 | 0.00131 | 0.00434 | 0.01836 | 2.57 |
| 1.15 | 0.00067 | 0.00077 | 0.00131 | 0.00130 | 0.00143 | 0.00431 | 0.02063 | 2.86 |
| 1.32 | 0.00067 | 0.00081 | 0.00143 | 0.00145 | 0.00155 | 0.00444 | 0.02361 | 3.18 |
| 1.52 | 0.00067 | 0.00085 | 0.00156 | 0.00160 | 0.00173 | 0.00458 | 0.02691 | 3.40 |
| 1.74 | 0.00069 | 0.00085 | 0.00168 | 0.00170 | 0.00183 | 0.00463 | 0.03000 | 3.60 |
| 2.00 | 0.00067 | 0.00088 | 0.00190 | 0.00178 | 0.00188 | 0.00488 | 0.03388 | 3.68 |
| 2.30 | 0.00065 | 0.00089 | 0.00215 | 0.00191 | 0.00202 | 0.00526 | 0.03840 | 3.87 |
| 2.64 | 0.00062 | 0.00084 | 0.00249 | 0.00198 | 0.00204 | 0.00544 | 0.04294 | 3.83 |
| 3.03 | 0.00058 | 0.00090 | 0.00267 | 0.00214 | 0.00199 | 0.00594 | 0.04754 | 3.71 |
| 3.48 | 0.00059 | 0.00087 | 0.00265 | 0.00200 | 0.00188 | 0.00594 | 0.05218 | 3.57 |
| 4.00 | 0.00063 | 0.00082 | 0.00289 | 0.00220 | 0.00198 | 0.00700 | 0.05593 | 3.81 |
| 4.59 | 0.00063 | 0.00072 | 0.00311 | 0.00219 | 0.00200 | 0.00736 | 0.05846 | 3.83 |
| 5.28 | 0.00061 | 0.00072 | 0.00314 | 0.00275 | 0.00201 | 0.00820 | 0.06237 | 3.66 |
| 6.06 | 0.00061 | 0.00067 | 0.00360 | 0.00311 | 0.00275 | 0.00922 | 0.06599 | 3.74 |
| 6.96 | 0.00058 | 0.00063 | 0.00451 | 0.00419 | 0.00372 | 0.01083 | 0.07447 | 4.73 |
| 8.00 | 0.00055 | 0.00059 | 0.00666 | 0.00510 | 0.00402 | 0.01326 | 0.08452 | 4.93 |
| 9.19 | 0.00052 | 0.00055 | 0.00994 | 0.00537 | 0.00352 | 0.01558 | 0.08307 | 4.17 |
| 10.56 | 0.00051 | 0.00052 | 0.01028 | 0.00519 | 0.00256 | 0.01804 | 0.08081 | 3.71 |
| 12.13 | 0.00045 | 0.00045 | 0.00621 | 0.00418 | 0.00176 | 0.02049 | 0.07417 | 3.44 |
| 13.93 | 0.00043 | 0.00033 | 0.00277 | 0.00370 | 0.00148 | 0.02420 | 0.06441 | 3.22 |
| 16.00 | 0.00037 | 0.00032 | 0.00122 | 0.00317 | 0.00136 | 0.02867 | 0.05350 | 3.16 |
| 18.38 | 0.00048 | 0.00026 | 0.00068 | 0.00228 | 0.00129 | 0.03300 | 0.04301 | 3.21 |
| 21.11 | 0.00044 | 0.00029 | 0.00055 | 0.00127 | 0.00112 | 0.03534 | 0.02788 | 3.21 |
| 24.25 | 0.00041 | 0.00028 | 0.00038 | 0.00065 | 0.00081 | 0.04681 | 0.01957 | 2.85 |
| 27.86 | 0.00041 | 0.00036 | 0.00035 | 0.00042 | 0.00076 | 0.05349 | 0.01090 | 2.42 |
| 32.00 | 0.00050 | 0.00035 | .. | 0.00016 | 0.00040 | 0.05702 | 0.01440 | 2.79 |
| 36.76 | 0.00041 | 0.00031 | .. | .. | .. | 0.05267 | 0.01278 | 2.16 |
| 42.22 | 0.00014 | 0.00037 | .. | .. | .. | 0.03751 | 0.01551 | 1.12 |
| 48.50 | .. | 0.00016 | .. | .. | .. | 0.02418 | 0.01149 | 0.78 |
| 55.72 | .. | 0.00014 | .. | .. | .. | 0.00838 | 0.02933 | 0.56 |
| 64.00 | .. | .. | .. | .. | .. | 0.00359 | 0.02225 | .. |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.04688 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | 0.07265 | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | 0.08903 | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | 0.10578 | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | 0.14020 | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | 0.31081 | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | 0.61606 | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | 2.25061 | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | 5.93041 | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | 6.93582 | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | 7.04937 | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | 4.14658 | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 48. Inorganic size spectra, raw data: Station HAS2.05.

| Station | HAS2.05 | HAS2.05 | HAS2.05 | HAS2.05 | HAS2.05 | HAS2.05 | HAS2.05 | HAS2.05 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 80 |
| Time GMT | 322 | 322 | 322 | 322 | 341 | 352 | 352 | 300 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.69 | 0.66 | 2.82 | 1.40 | 3.04 | 2.66 | 40.36 | 7.65 |
| Total PPM | 0.01644 | 0.01872 | 0.07738 | 0.06508 | 0.05149 | 0.57334 | 29.02735 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00064 | 0.00074 | 0.00100 | 0.00100 | 0.00111 | 0.00442 | 0.01715 | 1.98 |
| 0.87 | 0.00064 | 0.00073 | 0.00107 | 0.00107 | 0.00120 | 0.00430 | 0.01670 | 2.25 |
| 1.00 | 0.00066 | 0.00076 | 0.00118 | 0.00119 | 0.00131 | 0.00434 | 0.01836 | 2.57 |
| 1.15 | 0.00067 | 0.00077 | 0.00131 | 0.00130 | 0.00143 | 0.00431 | 0.02063 | 2.86 |
| 1.32 | 0.00067 | 0.00081 | 0.00143 | 0.00145 | 0.00155 | 0.00444 | 0.02361 | 3.18 |
| 1.52 | 0.00067 | 0.00085 | 0.00156 | 0.00160 | 0.00173 | 0.00458 | 0.02691 | 3.40 |
| 1.74 | 0.00069 | 0.00085 | 0.00168 | 0.00170 | 0.00183 | 0.00463 | 0.03000 | 3.60 |
| 2.00 | 0.00067 | 0.00088 | 0.00190 | 0.00178 | 0.00188 | 0.00488 | 0.03388 | 3.68 |
| 2.30 | 0.00065 | 0.00089 | 0.00215 | 0.00191 | 0.00202 | 0.00526 | 0.03840 | 3.87 |
| 2.64 | 0.00062 | 0.00084 | 0.00249 | 0.00198 | 0.00204 | 0.00544 | 0.04294 | 3.83 |
| 3.03 | 0.00058 | 0.00090 | 0.00267 | 0.00214 | 0.00199 | 0.00594 | 0.04754 | 3.71 |
| 3.48 | 0.00059 | 0.00087 | 0.00265 | 0.00200 | 0.00188 | 0.00594 | 0.05218 | 3.57 |
| 4.00 | 0.00063 | 0.00082 | 0.00289 | 0.00220 | 0.00198 | 0.00700 | 0.05593 | 3.81 |
| 4.59 | 0.00063 | 0.00072 | 0.00311 | 0.00219 | 0.00200 | 0.00736 | 0.05846 | 3.83 |
| 5.28 | 0.00061 | 0.00072 | 0.00314 | 0.00275 | 0.00201 | 0.00820 | 0.06237 | 3.66 |
| 6.06 | 0.00061 | 0.00067 | 0.00360 | 0.00311 | 0.00275 | 0.00922 | 0.06599 | 3.74 |
| 6.96 | 0.00058 | 0.00063 | 0.00451 | 0.00419 | 0.00372 | 0.01083 | 0.07447 | 4.73 |
| 8.00 | 0.00055 | 0.00059 | 0.00666 | 0.00510 | 0.00402 | 0.01326 | 0.08452 | 4.93 |
| 9.19 | 0.00052 | 0.00055 | 0.00994 | 0.00537 | 0.00352 | 0.01558 | 0.08307 | 4.17 |
| 10.56 | 0.00051 | 0.00052 | 0.01028 | 0.00519 | 0.00256 | 0.01804 | 0.08081 | 3.71 |
| 12.13 | 0.00045 | 0.00045 | 0.00621 | 0.00418 | 0.00176 | 0.02049 | 0.07417 | 3.44 |
| 13.93 | 0.00043 | 0.00033 | 0.00277 | 0.00370 | 0.00148 | 0.02420 | 0.06441 | 3.22 |
| 16.00 | 0.00037 | 0.00032 | 0.00122 | 0.00317 | 0.00136 | 0.02867 | 0.05350 | 3.16 |
| 18.38 | 0.00048 | 0.00026 | 0.00068 | 0.00228 | 0.00129 | 0.03300 | 0.04301 | 3.21 |
| 21.11 | 0.00044 | 0.00029 | 0.00055 | 0.00127 | 0.00112 | 0.03534 | 0.02788 | 3.21 |
| 24.25 | 0.00041 | 0.00028 | 0.00038 | 0.00065 | 0.00081 | 0.04681 | 0.01957 | 2.85 |
| 27.86 | 0.00041 | 0.00036 | 0.00035 | 0.00042 | 0.00076 | 0.05349 | 0.01090 | 2.42 |
| 32.00 | 0.00050 | 0.00035 | .. | 0.00016 | 0.00040 | 0.05702 | 0.01440 | 2.79 |
| 36.76 | 0.00041 | 0.00031 | .. | .. | .. | 0.05267 | 0.01278 | 2.16 |
| 42.22 | 0.00014 | 0.00037 | .. | .. | .. | 0.03751 | 0.01551 | 1.12 |
| 48.50 | .. | 0.00016 | .. | .. | .. | 0.02418 | 0.01149 | 0.78 |
| 55.72 | .. | 0.00014 | .. | .. | .. | 0.00838 | 0.02933 | 0.56 |
| 64.00 | .. | .. | .. | .. | .. | 0.00359 | 0.02225 | .. |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.04688 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | 0.07265 | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | 0.08903 | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | 0.10578 | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | 0.14020 | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | 0.31081 | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | 0.61606 | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | 2.25061 | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | 5.93041 | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | 6.93582 | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | 7.04937 | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | 4.14658 | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

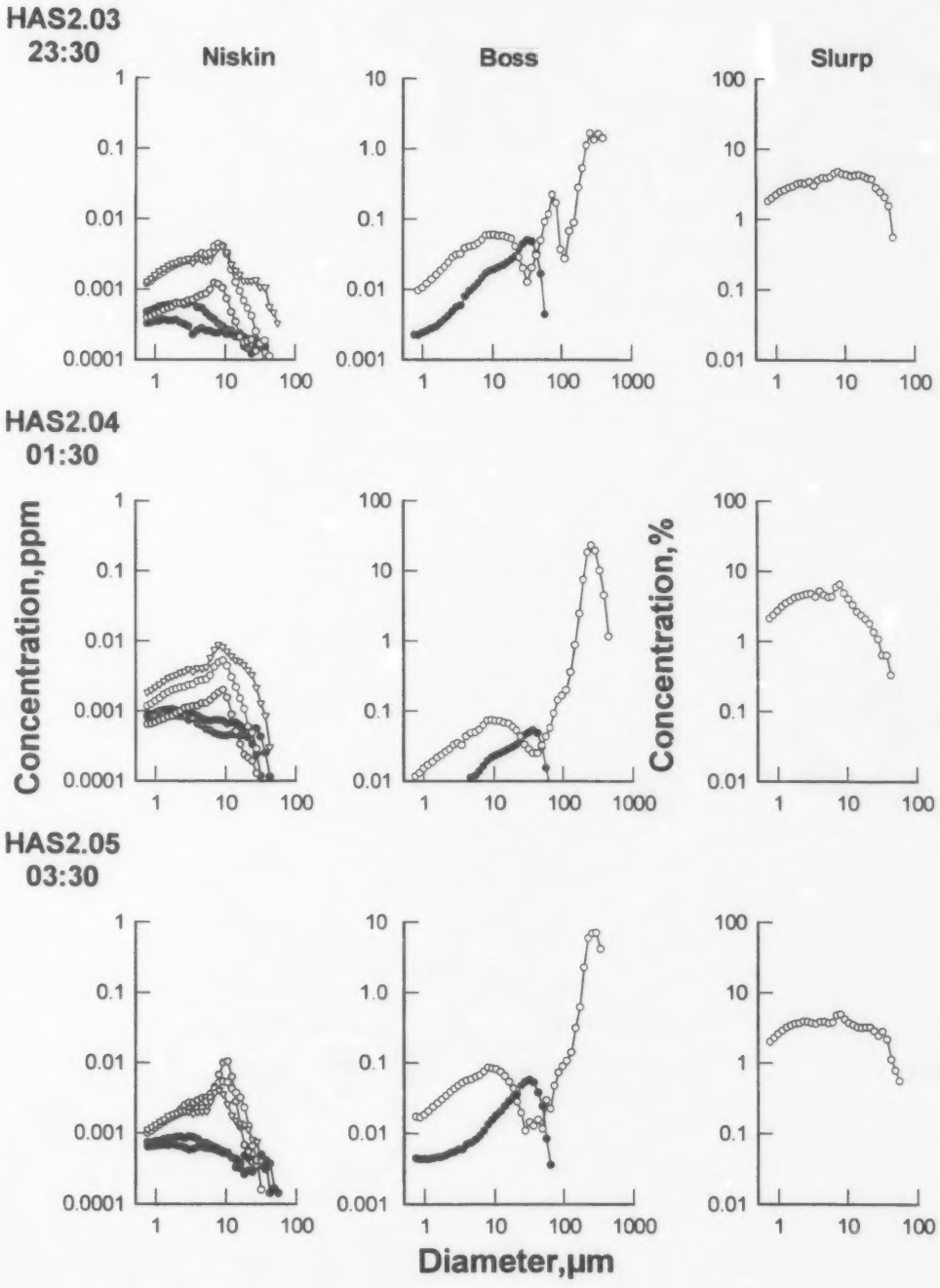


Figure 18. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles. For the BOSS samples the black circles are used for the 0.35-0.50 m above bottom sample and open circles are used for the 0.05-0.25 m sample.

Table 49. Inorganic size spectra, raw data: Station HAS2.06.

| Station | HAS2.06 | HAS2.06 | HAS2.06 | HAS2.06 | HAS2.06 | HAS2.06 | HAS2.06 | HAS2.06 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 82 |
| Time GMT | 522 | 522 | 522 | 522 | 535 | 601 | 601 | 507 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.77 | 0.78 | 1.30 | 2.80 | 0.85 | 4.18 | 4.26 | 206.71 |
| Total PPM | 0.00485 | 0.00899 | 0.07844 | 0.08199 | 0.05367 | 0.88947 | 1.02802 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00028 | 0.00039 | 0.00084 | 0.00117 | 0.00102 | 0.00747 | 0.00659 | 2.27 |
| 0.87 | 0.00027 | 0.00038 | 0.00089 | 0.00126 | 0.00112 | 0.00729 | 0.00666 | 2.41 |
| 1.00 | 0.00026 | 0.00037 | 0.00099 | 0.00137 | 0.00128 | 0.00718 | 0.00696 | 2.73 |
| 1.15 | 0.00025 | 0.00037 | 0.00109 | 0.00152 | 0.00143 | 0.00726 | 0.00731 | 3.01 |
| 1.32 | 0.00025 | 0.00037 | 0.00113 | 0.00167 | 0.00159 | 0.00736 | 0.00761 | 3.25 |
| 1.52 | 0.00023 | 0.00038 | 0.00124 | 0.00181 | 0.00174 | 0.00727 | 0.00781 | 3.53 |
| 1.74 | 0.00021 | 0.00036 | 0.00133 | 0.00193 | 0.00195 | 0.00740 | 0.00805 | 3.70 |
| 2.00 | 0.00021 | 0.00038 | 0.00148 | 0.00209 | 0.00205 | 0.00778 | 0.00837 | 3.78 |
| 2.30 | 0.00018 | 0.00038 | 0.00172 | 0.00217 | 0.00214 | 0.00802 | 0.00868 | 3.97 |
| 2.64 | 0.00018 | 0.00040 | 0.00203 | 0.00240 | 0.00235 | 0.00837 | 0.00903 | 3.95 |
| 3.03 | 0.00019 | 0.00041 | 0.00230 | 0.00234 | 0.00226 | 0.00882 | 0.00959 | 3.95 |
| 3.48 | 0.00015 | 0.00039 | 0.00242 | 0.00257 | 0.00202 | 0.00889 | 0.01021 | 4.12 |
| 4.00 | 0.00013 | 0.00031 | 0.00239 | 0.00283 | 0.00246 | 0.01109 | 0.01148 | 3.78 |
| 4.59 | 0.00014 | 0.00031 | 0.00231 | 0.00265 | 0.00269 | 0.01226 | 0.01322 | 3.61 |
| 5.28 | 0.00014 | 0.00027 | 0.00295 | 0.00292 | 0.00257 | 0.01283 | 0.01310 | 3.87 |
| 6.06 | 0.00014 | 0.00025 | 0.00390 | 0.00350 | 0.00284 | 0.01518 | 0.01451 | 4.02 |
| 6.96 | 0.00014 | 0.00023 | 0.00507 | 0.00463 | 0.00383 | 0.01878 | 0.01678 | 4.47 |
| 8.00 | 0.00015 | 0.00023 | 0.00702 | 0.00560 | 0.00416 | 0.02418 | 0.01987 | 4.71 |
| 9.19 | 0.00015 | 0.00023 | 0.01011 | 0.00618 | 0.00369 | 0.03068 | 0.02313 | 4.16 |
| 10.56 | 0.00013 | 0.00022 | 0.01092 | 0.00603 | 0.00284 | 0.03757 | 0.02665 | 3.76 |
| 12.13 | 0.00013 | 0.00022 | 0.00784 | 0.00528 | 0.00190 | 0.04332 | 0.02965 | 3.51 |
| 13.93 | 0.00015 | 0.00025 | 0.00407 | 0.00512 | 0.00140 | 0.04863 | 0.03447 | 3.21 |
| 16.00 | 0.00016 | 0.00018 | 0.00189 | 0.00464 | 0.00102 | 0.05139 | 0.03975 | 3.18 |
| 18.38 | 0.00013 | 0.00023 | 0.00100 | 0.00424 | 0.00101 | 0.05638 | 0.04531 | 3.04 |
| 21.11 | 0.00016 | 0.00024 | 0.00065 | 0.00307 | 0.00086 | 0.06202 | 0.05424 | 2.92 |
| 24.25 | 0.00019 | 0.00022 | 0.00045 | 0.00183 | 0.00066 | 0.06660 | 0.06389 | 2.70 |
| 27.86 | 0.00009 | 0.00025 | 0.00038 | 0.00076 | 0.00058 | 0.07315 | 0.07487 | 2.22 |
| 32.00 | 0.00007 | 0.00012 | .. | 0.00038 | 0.00020 | 0.07123 | 0.08684 | 2.06 |
| 36.76 | .. | 0.00024 | .. | .. | .. | 0.06084 | 0.09377 | 1.25 |
| 42.22 | .. | 0.00029 | .. | .. | .. | 0.04535 | 0.09826 | 1.17 |
| 48.50 | .. | 0.00014 | .. | .. | .. | 0.02657 | 0.08516 | 1.28 |
| 55.72 | .. | .. | .. | .. | .. | 0.01872 | 0.05477 | 0.39 |
| 64.00 | .. | .. | .. | .. | .. | 0.00960 | 0.02542 | .. |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.00601 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 50. Inorganic size spectra, raw data: Station HAS2.07.

| Station | HAS2.07 | HAS2.07 | HAS2.07 | HAS2.07 | HAS2.07 | HAS2.07 | HAS2.07 | HAS2.07 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 81 |
| Time GMT | 725 | 725 | 725 | 725 | 737 | 749 | 749 | 706 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 1.53 | 0.61 | 0.59 | 0.90 | 4.73 | 3.85 | 103.95 | 129.38 |
| Total PPM | 0.01527 | 0.01056 | 0.05178 | 0.07632 | 0.06610 | 0.68566 | 31.34246 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00119 | 0.00054 | 0.00092 | 0.00104 | 0.00177 | 0.00536 | 0.01137 | 2.14 |
| 0.87 | 0.00100 | 0.00049 | 0.00092 | 0.00111 | 0.00187 | 0.00527 | 0.01226 | 2.39 |
| 1.00 | 0.00088 | 0.00049 | 0.00097 | 0.00122 | 0.00203 | 0.00546 | 0.01395 | 2.69 |
| 1.15 | 0.00074 | 0.00048 | 0.00104 | 0.00134 | 0.00219 | 0.00565 | 0.01578 | 2.97 |
| 1.32 | 0.00063 | 0.00048 | 0.00110 | 0.00149 | 0.00233 | 0.00590 | 0.01792 | 3.22 |
| 1.52 | 0.00056 | 0.00048 | 0.00120 | 0.00163 | 0.00255 | 0.00633 | 0.02031 | 3.49 |
| 1.74 | 0.00053 | 0.00049 | 0.00129 | 0.00175 | 0.00275 | 0.00653 | 0.02301 | 3.72 |
| 2.00 | 0.00055 | 0.00048 | 0.00143 | 0.00185 | 0.00281 | 0.00703 | 0.02620 | 3.91 |
| 2.30 | 0.00050 | 0.00051 | 0.00164 | 0.00202 | 0.00292 | 0.00765 | 0.02916 | 3.95 |
| 2.64 | 0.00053 | 0.00049 | 0.00183 | 0.00213 | 0.00276 | 0.00835 | 0.03372 | 4.06 |
| 3.03 | 0.00050 | 0.00050 | 0.00203 | 0.00230 | 0.00295 | 0.00873 | 0.03745 | 3.99 |
| 3.48 | 0.00044 | 0.00044 | 0.00239 | 0.00233 | 0.00289 | 0.00828 | 0.03986 | 4.19 |
| 4.00 | 0.00045 | 0.00041 | 0.00246 | 0.00253 | 0.00265 | 0.01022 | 0.04507 | 4.13 |
| 4.59 | 0.00038 | 0.00042 | 0.00247 | 0.00277 | 0.00275 | 0.01129 | 0.04854 | 3.63 |
| 5.28 | 0.00040 | 0.00037 | 0.00251 | 0.00298 | 0.00255 | 0.01176 | 0.04994 | 3.79 |
| 6.06 | 0.00040 | 0.00035 | 0.00272 | 0.00339 | 0.00271 | 0.01352 | 0.05414 | 4.03 |
| 6.96 | 0.00044 | 0.00032 | 0.00310 | 0.00461 | 0.00352 | 0.01618 | 0.06358 | 4.98 |
| 8.00 | 0.00046 | 0.00031 | 0.00369 | 0.00563 | 0.00406 | 0.01923 | 0.07379 | 5.17 |
| 9.19 | 0.00047 | 0.00031 | 0.00450 | 0.00639 | 0.00402 | 0.02258 | 0.07672 | 4.35 |
| 10.56 | 0.00052 | 0.00031 | 0.00433 | 0.00635 | 0.00349 | 0.02557 | 0.07687 | 3.91 |
| 12.13 | 0.00051 | 0.00030 | 0.00320 | 0.00582 | 0.00234 | 0.02874 | 0.07342 | 3.48 |
| 13.93 | 0.00047 | 0.00029 | 0.00236 | 0.00543 | 0.00175 | 0.03305 | 0.07016 | 3.25 |
| 16.00 | 0.00047 | 0.00029 | 0.00153 | 0.00438 | 0.00133 | 0.03810 | 0.06661 | 3.16 |
| 18.38 | 0.00053 | 0.00028 | 0.00096 | 0.00330 | 0.00124 | 0.04390 | 0.05872 | 2.84 |
| 21.11 | 0.00036 | 0.00026 | 0.00057 | 0.00190 | 0.00122 | 0.05358 | 0.04788 | 2.74 |
| 24.25 | 0.00028 | 0.00024 | 0.00024 | 0.00048 | 0.00092 | 0.06114 | 0.03668 | 2.39 |
| 27.86 | 0.00027 | 0.00018 | 0.00019 | 0.00014 | 0.00069 | 0.06466 | 0.02721 | 2.09 |
| 32.00 | 0.00021 | 0.00008 | 0.00017 | .. | 0.00076 | 0.05968 | 0.02355 | 1.52 |
| 36.76 | 0.00020 | .. | .. | .. | 0.00027 | 0.04632 | 0.01939 | 1.28 |
| 42.22 | 0.00023 | .. | .. | .. | .. | 0.02626 | 0.01983 | 0.89 |
| 48.50 | 0.00018 | .. | .. | .. | .. | 0.01316 | 0.01967 | 0.92 |
| 55.72 | .. | .. | .. | .. | .. | 0.00618 | 0.02268 | 0.45 |
| 64.00 | .. | .. | .. | .. | .. | .. | 0.03381 | 0.28 |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.03327 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | 0.07296 | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | 0.08403 | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | 0.09924 | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | 0.24846 | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | 0.55827 | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | 1.22936 | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | 4.06589 | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | 7.47487 | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | 8.03790 | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | 5.27971 | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | 2.38445 | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | 0.48479 | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 51. Inorganic size spectra, raw data: Station HAS2.08.

| Station | HAS2.08 | HAS2.08 | HAS2.08 | HAS2.08 | HAS2.08 | HAS2.08 | HAS2.08 | HAS2.08 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 80 |
| Time GMT | 904 | 904 | 904 | 904 | 921 | 944 | 944 | 806 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 1.16 | 0.71 | 0.56 | 1.13 | 0.72 | 2.27 | 7.74 | 292.53 |
| Total PPM | 0.01660 | 0.00550 | 0.06523 | 0.08015 | 0.05204 | 0.69981 | 0.71466 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00093 | 0.00026 | 0.00076 | 0.00118 | 0.00108 | 0.00528 | 0.00416 | 2.43 |
| 0.87 | 0.00084 | 0.00024 | 0.00081 | 0.00124 | 0.00122 | 0.00509 | 0.00422 | 2.56 |
| 1.00 | 0.00078 | 0.00023 | 0.00089 | 0.00141 | 0.00137 | 0.00511 | 0.00436 | 2.84 |
| 1.15 | 0.00070 | 0.00024 | 0.00098 | 0.00154 | 0.00153 | 0.00506 | 0.00460 | 3.12 |
| 1.32 | 0.00065 | 0.00022 | 0.00107 | 0.00165 | 0.00174 | 0.00513 | 0.00481 | 3.39 |
| 1.52 | 0.00060 | 0.00021 | 0.00117 | 0.00180 | 0.00190 | 0.00512 | 0.00507 | 3.60 |
| 1.74 | 0.00060 | 0.00021 | 0.00126 | 0.00195 | 0.00206 | 0.00519 | 0.00530 | 3.75 |
| 2.00 | 0.00055 | 0.00019 | 0.00143 | 0.00205 | 0.00216 | 0.00556 | 0.00556 | 3.96 |
| 2.30 | 0.00051 | 0.00019 | 0.00163 | 0.00217 | 0.00223 | 0.00569 | 0.00576 | 4.08 |
| 2.64 | 0.00044 | 0.00016 | 0.00188 | 0.00233 | 0.00234 | 0.00600 | 0.00623 | 4.06 |
| 3.03 | 0.00047 | 0.00017 | 0.00203 | 0.00241 | 0.00242 | 0.00655 | 0.00656 | 3.91 |
| 3.48 | 0.00045 | 0.00011 | 0.00226 | 0.00229 | 0.00222 | 0.00657 | 0.00637 | 3.40 |
| 4.00 | 0.00041 | 0.00011 | 0.00223 | 0.00273 | 0.00230 | 0.00764 | 0.00806 | 3.59 |
| 4.59 | 0.00042 | 0.00017 | 0.00244 | 0.00298 | 0.00226 | 0.00871 | 0.00896 | 3.37 |
| 5.28 | 0.00041 | 0.00016 | 0.00275 | 0.00318 | 0.00218 | 0.00943 | 0.01028 | 3.36 |
| 6.06 | 0.00043 | 0.00017 | 0.00344 | 0.00358 | 0.00242 | 0.01076 | 0.01188 | 3.53 |
| 6.96 | 0.00048 | 0.00019 | 0.00445 | 0.00464 | 0.00347 | 0.01360 | 0.01448 | 4.13 |
| 8.00 | 0.00052 | 0.00021 | 0.00602 | 0.00558 | 0.00394 | 0.01706 | 0.01822 | 4.39 |
| 9.19 | 0.00055 | 0.00023 | 0.00827 | 0.00602 | 0.00375 | 0.02114 | 0.02211 | 3.91 |
| 10.56 | 0.00064 | 0.00024 | 0.00779 | 0.00593 | 0.00278 | 0.02556 | 0.02609 | 3.54 |
| 12.13 | 0.00069 | 0.00027 | 0.00481 | 0.00597 | 0.00167 | 0.02932 | 0.02955 | 3.24 |
| 13.93 | 0.00077 | 0.00032 | 0.00271 | 0.00588 | 0.00117 | 0.03551 | 0.03376 | 3.20 |
| 16.00 | 0.00075 | 0.00030 | 0.00161 | 0.00499 | 0.00098 | 0.04420 | 0.03779 | 3.04 |
| 18.38 | 0.00073 | 0.00022 | 0.00093 | 0.00380 | 0.00087 | 0.04990 | 0.04305 | 3.13 |
| 21.11 | 0.00076 | 0.00016 | 0.00063 | 0.00188 | 0.00066 | 0.05957 | 0.05038 | 2.62 |
| 24.25 | 0.00059 | 0.00023 | 0.00044 | 0.00079 | 0.00059 | 0.06439 | 0.05670 | 2.72 |
| 27.86 | 0.00046 | 0.00009 | 0.00026 | 0.00018 | 0.00050 | 0.06339 | 0.06632 | 2.57 |
| 32.00 | 0.00036 | .. | 0.00028 | .. | 0.00024 | 0.05822 | 0.06921 | 2.01 |
| 36.76 | 0.00013 | .. | .. | .. | .. | 0.04665 | 0.06600 | 1.83 |
| 42.22 | .. | .. | .. | .. | .. | 0 03232 | 0.04563 | 1.59 |
| 48.50 | .. | .. | .. | .. | .. | 0.02146 | 0.02556 | 1.06 |
| 55.72 | .. | .. | .. | .. | .. | 0.00932 | 0.00608 | 0.97 |
| 64.00 | .. | .. | .. | .. | .. | 0.00529 | 0.00157 | 0.70 |
| 73.52 | .. | .. | .. | .. | .. | .. | .. | 0.41 |
| 84.45 | .. | .. | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

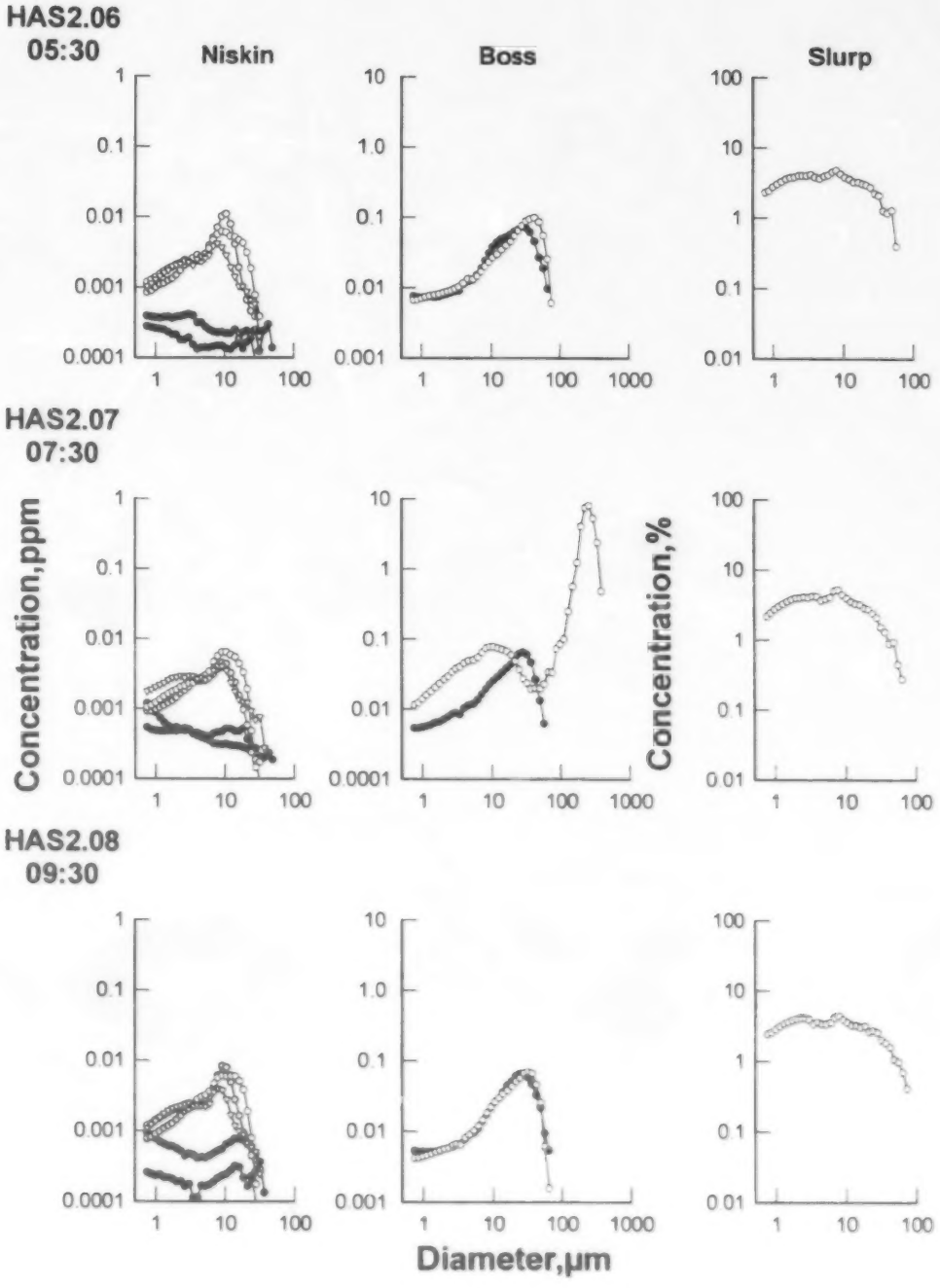


Figure 19. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles. For the BOSS samples the black circles are used for the 0.35-0.50 m above bottom sample and open circles are used for the 0.05-0.25 m sample.

Table 52. Inorganic size spectra, raw data: Station HAS2.09.

| Station | HAS2.09 | HAS2.09 | HAS2.09 | HAS2.09 | HAS2.09 | HAS2.09 | HAS2.09 | HAS2.09 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 80 |
| Time GMT | 1122 | 1122 | 1122 | 1122 | 1139 | 1150 | 1150 | 1103 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.70 | 0.72 | 1.65 | 2.10 | 0.70 | 3.41 | 795.89 | 293.36 |
| Total PPM | 0.00615 | 0.19311 | 1.45489 | 0.06596 | 0.00408 | 0.13189 | 0.16446 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00032 | 0.00557 | 0.01082 | 0.00107 | 0.00020 | | 0.00308 | 2.45 |
| 0.87 | 0.00030 | 0.00575 | 0.01146 | 0.00115 | 0.00020 | 0.00343 | 0.00369 | 2.57 |
| 1.00 | 0.00030 | 0.00612 | 0.01259 | 0.00129 | 0.00020 | 0.00332 | 0.00385 | 2.89 |
| 1.15 | 0.00031 | 0.00664 | 0.01418 | 0.00143 | 0.00019 | 0.00346 | 0.00412 | 3.15 |
| 1.32 | 0.00030 | 0.00675 | 0.01581 | 0.00156 | 0.00019 | 0.00359 | 0.00462 | 3.37 |
| 1.52 | 0.00030 | 0.00704 | 0.01773 | 0.00173 | 0.00019 | 0.00378 | 0.00513 | 3.55 |
| 1.74 | 0.00031 | 0.00718 | 0.01980 | 0.00189 | 0.00018 | 0.00386 | 0.00560 | 3.61 |
| 2.00 | 0.00029 | 0.00724 | 0.02238 | 0.00202 | 0.00018 | 0.00410 | 0.00604 | 3.74 |
| 2.30 | 0.00029 | 0.00725 | 0.02475 | 0.00216 | 0.00015 | 0.00441 | 0.00649 | 3.76 |
| 2.64 | 0.00033 | 0.00683 | 0.02812 | 0.00230 | 0.00014 | 0.00479 | 0.00689 | 3.72 |
| 3.03 | 0.00032 | 0.00683 | 0.03116 | 0.00237 | 0.00015 | 0.00481 | 0.00701 | 3.65 |
| 3.48 | 0.00030 | 0.00688 | 0.03132 | 0.00234 | 0.00009 | 0.00474 | 0.00731 | 3.26 |
| 4.00 | 0.00025 | 0.00685 | 0.03931 | 0.00265 | 0.00010 | 0.00485 | 0.00730 | 3.31 |
| 4.59 | 0.00031 | 0.00666 | 0.04240 | 0.00282 | 0.00014 | 0.00496 | 0.00700 | 3.28 |
| 5.28 | 0.00028 | 0.00705 | 0.04605 | 0.00288 | 0.00014 | 0.00540 | 0.00697 | 3.25 |
| 6.06 | 0.00025 | 0.00805 | 0.05039 | 0.00338 | 0.00014 | 0.00618 | 0.00774 | 3.42 |
| 6.96 | 0.00023 | 0.00953 | 0.05934 | 0.00451 | 0.00014 | 0.00718 | 0.01063 | 3.60 |
| 8.00 | 0.00019 | 0.01047 | 0.07092 | 0.00532 | 0.00014 | 0.00865 | 0.01255 | 3.69 |
| 9.19 | 0.00014 | 0.01052 | 0.07749 | 0.00562 | 0.00013 | 0.01018 | 0.01308 | 3.47 |
| 10.56 | 0.00013 | 0.00955 | 0.08222 | 0.00504 | 0.00011 | 0.00921 | 0.01110 | 3.21 |
| 12.13 | 0.00011 | 0.00831 | 0.08832 | 0.00381 | 0.00012 | 0.00638 | 0.00680 | 3.11 |
| 13.93 | 0.00009 | 0.00755 | 0.09435 | 0.00279 | 0.00010 | 0.00414 | 0.00444 | 3.10 |
| 16.00 | 0.00010 | 0.00708 | 0.09944 | 0.00202 | 0.00014 | 0.00324 | 0.00299 | 3.23 |
| 18.38 | 0.00007 | 0.00595 | 0.10040 | 0.00144 | 0.00016 | 0.00253 | 0.00263 | 3.29 |
| 21.11 | 0.00009 | 0.00502 | 0.09238 | 0.00092 | 0.00018 | 0.00195 | 0.00196 | 3.06 |
| 24.25 | 0.00015 | 0.00363 | 0.08847 | 0.00067 | 0.00010 | 0.00135 | 0.00160 | 2.68 |
| 27.86 | 0.00007 | 0.00254 | 0.07766 | 0.00037 | 0.00015 | 0.00126 | 0.00160 | 2.26 |
| 32.00 | 0.00003 | 0.00178 | 0.05082 | 0.00020 | 0.00004 | 0.00047 | 0.00098 | 2.57 |
| 36.76 | .. | 0.00145 | 0.02404 | 0.00023 | .. | 0.00139 | 0.00068 | 1.95 |
| 42.22 | .. | 0.00106 | 0.01743 | .. | .. | 0.00207 | 0.00057 | 1.53 |
| 48.50 | .. | .. | 0.00937 | .. | .. | 0.00175 | .. | 1.29 |
| 55.72 | .. | .. | 0.00394 | .. | .. | 0.00137 | .. | 1.41 |
| 64.00 | .. | .. | .. | .. | .. | 0.00156 | .. | 1.37 |
| 73.52 | .. | .. | .. | .. | .. | 0.00152 | .. | 1.27 |
| 84.45 | .. | .. | .. | .. | .. | .. | .. | 0.94 |
| 97.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 53. Inorganic size spectra, raw data: Station HAS2.10.

| Station | HAS2.10 | HAS2.10 | HAS2.10 | HAS2.10 | HAS2.10 | HAS2.10 | HAS2.10 | HAS2.10 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 80 |
| Time GMT | 1329 | 1329 | 1329 | 1329 | 1348 | 1359 | 1359 | 1319 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.49 | 0.45 | 0.28 | 0.80 | 2.35 | 3.67 | 31.33 | 12.31 |
| Total PPM | 0.01306 | 0.00956 | 0.05404 | 0.10136 | 0.08861 | 0.88352 | 0.96492 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00062 | 0.00041 | 0.00056 | 0.00135 | 0.00175 | 0.00829 | 0.00805 | 0.93 |
| 0.87 | 0.00060 | 0.00041 | 0.00057 | 0.00138 | 0.00189 | 0.00817 | 0.00860 | 0.85 |
| 1.00 | 0.00059 | 0.00042 | 0.00061 | 0.00150 | 0.00216 | 0.00855 | 0.00949 | 0.83 |
| 1.15 | 0.00060 | 0.00043 | 0.00063 | 0.00166 | 0.00244 | 0.00905 | 0.01035 | 0.83 |
| 1.32 | 0.00060 | 0.00044 | 0.00068 | 0.00184 | 0.00268 | 0.00939 | 0.01171 | 0.83 |
| 1.52 | 0.00059 | 0.00044 | 0.00071 | 0.00199 | 0.00293 | 0.00989 | 0.01309 | 0.82 |
| 1.74 | 0.00055 | 0.00045 | 0.00076 | 0.00219 | 0.00316 | 0.01052 | 0.01448 | 0.82 |
| 2.00 | 0.00056 | 0.00046 | 0.00087 | 0.00241 | 0.00340 | 0.01129 | 0.01558 | 0.81 |
| 2.30 | 0.00056 | 0.00045 | 0.00091 | 0.00256 | 0.00361 | 0.01210 | 0.01780 | 0.81 |
| 2.64 | 0.00051 | 0.00048 | 0.00104 | 0.00274 | 0.00378 | 0.01288 | 0.01948 | 0.83 |
| 3.03 | 0.00051 | 0.00043 | 0.00110 | 0.00285 | 0.00404 | 0.01336 | 0.02127 | 0.85 |
| 3.48 | 0.00047 | 0.00041 | 0.00116 | 0.00313 | 0.00382 | 0.01507 | 0.02186 | 0.89 |
| 4.00 | 0.00043 | 0.00044 | 0.00119 | 0.00317 | 0.00400 | 0.01659 | 0.02584 | 0.97 |
| 4.59 | 0.00044 | 0.00044 | 0.00131 | 0.00323 | 0.00344 | 0.01783 | 0.03022 | 1.01 |
| 5.28 | 0.00041 | 0.00040 | 0.00146 | 0.00361 | 0.00334 | 0.01784 | 0.03262 | 1.09 |
| 6.06 | 0.00039 | 0.00034 | 0.00166 | 0.00383 | 0.00351 | 0.01983 | 0.03593 | 1.24 |
| 6.96 | 0.00037 | 0.00033 | 0.00208 | 0.00473 | 0.00449 | 0.02327 | 0.04173 | 1.47 |
| 8.00 | 0.00037 | 0.00030 | 0.00286 | 0.00590 | 0.00548 | 0.02737 | 0.04891 | 1.83 |
| 9.19 | 0.00039 | 0.00031 | 0.00412 | 0.00729 | 0.00601 | 0.03047 | 0.05388 | 2.19 |
| 10.56 | 0.00037 | 0.00030 | 0.00452 | 0.00753 | 0.00568 | 0.03334 | 0.05821 | 2.67 |
| 12.13 | 0.00038 | 0.00028 | 0.00450 | 0.00616 | 0.00396 | 0.03708 | 0.05918 | 3.22 |
| 13.93 | 0.00039 | 0.00024 | 0.00475 | 0.00549 | 0.00275 | 0.04301 | 0.06094 | 3.96 |
| 16.00 | 0.00038 | 0.00026 | 0.00458 | 0.00520 | 0.00241 | 0.04903 | 0.06265 | 4.67 |
| 18.38 | 0.00040 | 0.00020 | 0.00413 | 0.00513 | 0.00184 | 0.05891 | 0.06148 | 5.45 |
| 21.11 | 0.00038 | 0.00020 | 0.00355 | 0.00491 | 0.00178 | 0.06731 | 0.05749 | 6.14 |
| 24.25 | 0.00025 | 0.00010 | 0.00232 | 0.00431 | 0.00170 | 0.08233 | 0.05309 | 6.99 |
| 27.86 | 0.00027 | 0.00014 | 0.00112 | 0.00278 | 0.00111 | 0.07821 | 0.04314 | 7.87 |
| 32.00 | 0.00040 | 0.00006 | 0.00029 | 0.00185 | 0.00073 | 0.06563 | 0.03016 | 8.47 |
| 36.76 | 0.00017 | .. | .. | 0.00066 | 0.00048 | 0.04385 | 0.01741 | 7.89 |
| 42.22 | 0.00010 | .. | .. | .. | 0.00023 | 0.02140 | 0.00951 | 7.69 |
| 48.50 | .. | .. | .. | .. | .. | 0.00945 | 0.00537 | 5.68 |
| 55.72 | .. | .. | .. | .. | .. | 0.00668 | 0.00541 | 5.02 |
| 64.00 | .. | .. | .. | .. | .. | 0.00327 | .. | 2.76 |
| 73.52 | .. | .. | .. | .. | .. | 0.00225 | .. | 1.61 |
| 84.45 | .. | .. | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

Table 54. Inorganic size spectra, raw data: Station HAS2.11.

| Station | HAS2.11 | HAS2.11 | HAS2.11 | HAS2.11 | HAS2.11 | HAS2.11 | HAS2.11 | HAS2.11 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 80 |
| Time GMT | 1538 | 1538 | 1538 | 1538 | 1548 | 1602 | 1602 | 1521 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.42 | 0.32 | 0.85 | 0.85 | 1.32 | 4.18 | 167.97 | 4.13 |
| Total PPM | 0.01085 | 0.00815 | 0.09406 | 0.07436 | 0.04882 | 0.62207 | 85.72436 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00051 | 0.00042 | 0.00112 | 0.00145 | 0.00105 | 0.00634 | 0.01474 | 2.51 |
| 0.87 | 0.00050 | 0.00042 | 0.00125 | 0.00155 | 0.00114 | 0.00642 | 0.01632 | 2.72 |
| 1.00 | 0.00050 | 0.00044 | 0.00141 | 0.00173 | 0.00127 | 0.00689 | 0.01870 | 3.02 |
| 1.15 | 0.00049 | 0.00043 | 0.00163 | 0.00190 | 0.00138 | 0.00739 | 0.02140 | 3.26 |
| 1.32 | 0.00049 | 0.00045 | 0.00181 | 0.00212 | 0.00152 | 0.00863 | 0.02487 | 3.52 |
| 1.52 | 0.00048 | 0.00043 | 0.00203 | 0.00225 | 0.00170 | 0.00875 | 0.02853 | 3.75 |
| 1.74 | 0.00046 | 0.00044 | 0.00223 | 0.00243 | 0.00175 | 0.00917 | 0.03241 | 3.79 |
| 2.00 | 0.00045 | 0.00044 | 0.00248 | 0.00253 | 0.00188 | 0.01028 | 0.03664 | 3.88 |
| 2.30 | 0.00044 | 0.00043 | 0.00288 | 0.00268 | 0.00199 | 0.01075 | 0.04055 | 3.99 |
| 2.64 | 0.00038 | 0.00042 | 0.00342 | 0.00293 | 0.00211 | 0.01206 | 0.04548 | 4.02 |
| 3.03 | 0.00036 | 0.00040 | 0.00389 | 0.00294 | 0.00207 | 0.01214 | 0.04924 | 4.23 |
| 3.48 | 0.00040 | 0.00036 | 0.00410 | 0.00287 | 0.00215 | 0.01321 | 0.05040 | 3.99 |
| 4.00 | 0.00029 | 0.00026 | 0.00484 | 0.00338 | 0.00210 | 0.01364 | 0.06438 | 3.89 |
| 4.59 | 0.00028 | 0.00029 | 0.00505 | 0.00337 | 0.00199 | 0.01540 | 0.06845 | 3.89 |
| 5.28 | 0.00036 | 0.00025 | 0.00517 | 0.00386 | 0.00184 | 0.01583 | 0.06869 | 3.88 |
| 6.06 | 0.00027 | 0.00023 | 0.00552 | 0.00432 | 0.00264 | 0.01746 | 0.07381 | 3.98 |
| 6.96 | 0.00038 | 0.00022 | 0.00606 | 0.00549 | 0.00305 | 0.02105 | 0.08366 | 4.64 |
| 8.00 | 0.00037 | 0.00020 | 0.00763 | 0.00640 | 0.00348 | 0.02548 | 0.09588 | 4.70 |
| 9.19 | 0.00035 | 0.00020 | 0.01013 | 0.00629 | 0.00354 | 0.02818 | 0.09149 | 4.02 |
| 10.56 | 0.00033 | 0.00019 | 0.00935 | 0.00505 | 0.00300 | 0.03121 | 0.08688 | 3.54 |
| 12.13 | 0.00032 | 0.00019 | 0.00571 | 0.00347 | 0.00195 | 0.03260 | 0.07648 | 3.19 |
| 13.93 | 0.00030 | 0.00015 | 0.00297 | 0.00220 | 0.00138 | 0.03557 | 0.06530 | 2.88 |
| 16.00 | 0.00028 | 0.00015 | 0.00154 | 0.00130 | 0.00093 | 0.03933 | 0.05583 | 2.85 |
| 18.38 | 0.00026 | 0.00020 | 0.00087 | 0.00074 | 0.00077 | 0.04523 | 0.04629 | 2.89 |
| 21.11 | 0.00031 | 0.00018 | 0.00047 | 0.00054 | 0.00054 | 0.05342 | 0.03232 | 2.47 |
| 24.25 | 0.00024 | 0.00018 | 0.00034 | 0.00036 | 0.00046 | 0.05628 | 0.02988 | 1.80 |
| 27.86 | 0.00020 | 0.00012 | 0.00017 | 0.00021 | 0.00024 | 0.04294 | 0.02623 | 1.49 |
| 32.00 | 0.00035 | 0.00006 | .. | .. | 0.00033 | 0.02533 | 0.02510 | 1.69 |
| 36.76 | 0.00016 | .. | .. | .. | 0.00038 | 0.00990 | 0.03172 | 1.45 |
| 42.22 | 0.00018 | .. | .. | .. | 0.00018 | 0.00122 | 0.02819 | 1.31 |
| 48.50 | 0.00017 | .. | .. | .. | .. | .. | 0.03294 | 1.97 |
| 55.72 | .. | .. | .. | .. | .. | .. | 0.06686 | 0.79 |
| 64.00 | .. | .. | .. | .. | .. | .. | 0.08922 | .. |
| 73.52 | .. | .. | .. | .. | .. | .. | 0.12033 | .. |
| 84.45 | .. | .. | .. | .. | .. | .. | 0.16415 | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | 0.16693 | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | 0.23021 | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | 0.45879 | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | 0.83118 | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | 1.75279 | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | 5.33264 | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | 15.80159 | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | 22.29095 | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | 20.23392 | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | 11.53476 | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | 5.18724 | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

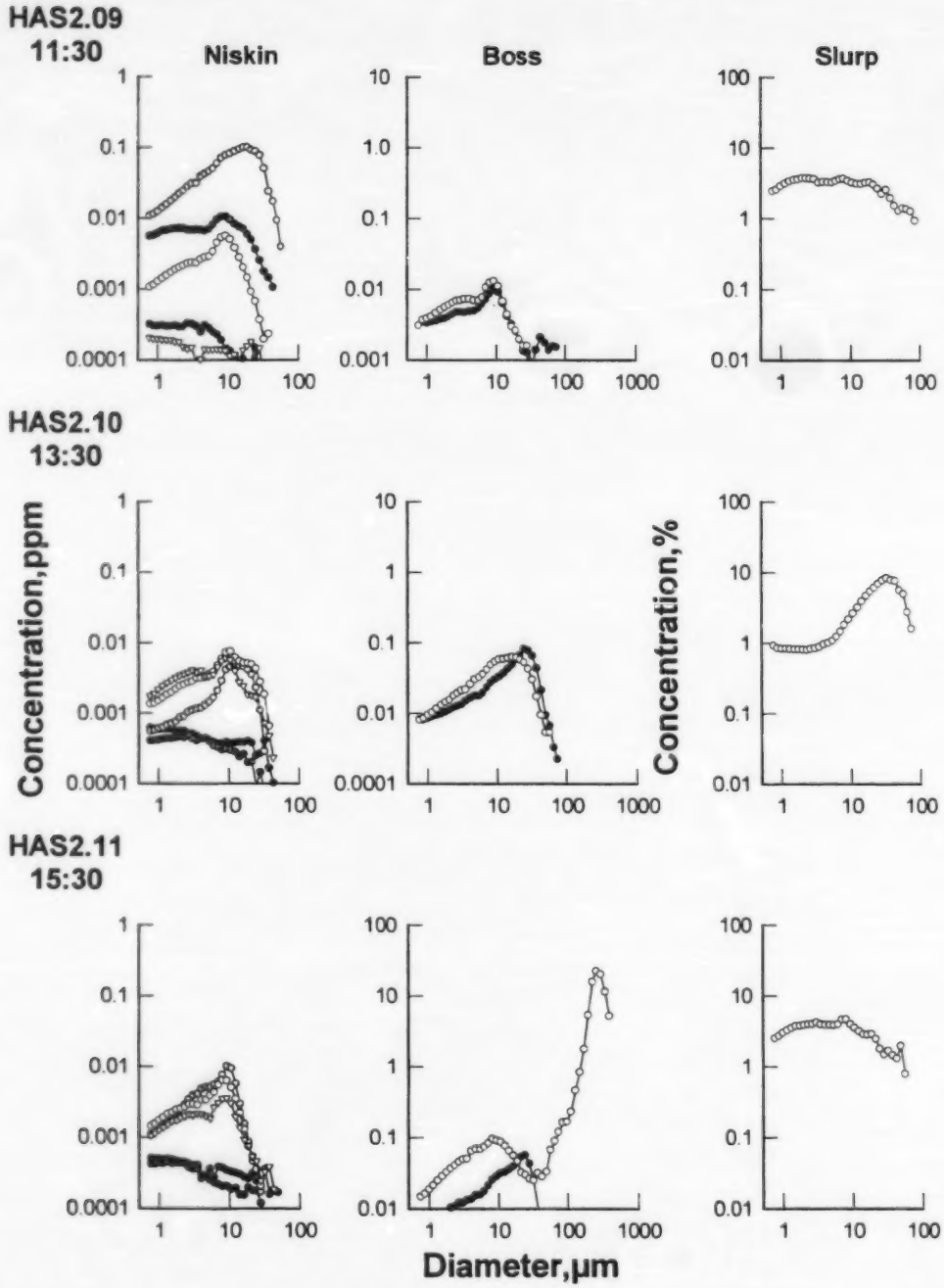


Figure 20. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles. For the BOSS samples the black circles are used for the 0.35-0.50 m above bottom sample and open circles are used for the 0.05-0.25 m sample.

Table 55. Inorganic size spectra, raw data: Station HAS2.12.

| Station | HAS2.12 | HAS2.12 | HAS2.12 | HAS2.12 | HAS2.12 | HAS2.12 | HAS2.12 | HAS2.12 |
|---|---|---|---|---|---|---|---|---|
| Depth(m) | 1 | 25 | 50 | 75 | 80 | (0.35-0.50) | (0.05-0.25) | 80 |
| Time GMT | 1738 | 1738 | 1738 | 1738 | 1747 | 1758 | 1758 | 1717 |
| Sampler | Niskin | Niskin | Niskin | Niskin | CABLE | BOSS | BOSS | slurp |
| Total SPM | 0.65 | 0.76 | 1.67 | 1.06 | 1.57 | 2.38 | 3.27 | 2269.95 |
| Total PPM | 0.00737 | 0.00524 | 0.08280 | 0.06951 | 0.05721 | 0.66801 | 0.90507 | 100.00 |
| Diameter (µm) | | | | | | | | |
| 0.76 | 0.00036 | 0.00030 | 0.00122 | 0.00108 | 0.00103 | .. | 0.00706 | 2.30 |
| 0.87 | 0.00034 | 0.00029 | 0.00134 | 0.00118 | 0.00112 | 0.00455 | 0.00687 | 2.47 |
| 1.00 | 0.00034 | 0.00028 | 0.00154 | 0.00133 | 0.00128 | 0.00457 | 0.00697 | 2.72 |
| 1.15 | 0.00033 | 0.00027 | 0.00171 | 0.00150 | 0.00143 | 0.00463 | 0.00705 | 3.01 |
| 1.32 | 0.00033 | 0.00025 | 0.00196 | 0.00172 | 0.00160 | 0.00477 | 0.00704 | 3.22 |
| 1.52 | 0.00032 | 0.00025 | 0.00217 | 0.00192 | 0.00179 | 0.00489 | 0.00704 | 3.45 |
| 1.74 | 0.00033 | 0.00024 | 0.00234 | 0.00207 | 0.00196 | 0.00496 | 0.00689 | 3.54 |
| 2.00 | 0.00030 | 0.00023 | 0.00258 | 0.00233 | 0.00213 | 0.00522 | 0.00686 | 3.70 |
| 2.30 | 0.00029 | 0.00021 | 0.00303 | 0.00253 | 0.00223 | 0.00510 | 0.00692 | 3.75 |
| 2.64 | 0.00026 | 0.00019 | 0.00345 | 0.00269 | 0.00238 | 0.00541 | 0.00718 | 3.94 |
| 3.03 | 0.00027 | 0.00022 | 0.00408 | 0.00279 | 0.00241 | 0.00582 | 0.00731 | 3.92 |
| 3.48 | 0.00026 | 0.00019 | 0.00439 | 0.00293 | 0.00235 | 0.00574 | 0.00726 | 3.74 |
| 4.00 | 0.00026 | 0.00015 | 0.00543 | 0.00321 | 0.00229 | 0.00729 | 0.00815 | 4.08 |
| 4.59 | 0.00027 | 0.00017 | 0.00584 | 0.00323 | 0.00229 | 0.00771 | 0.00849 | 4.03 |
| 5.28 | 0.00027 | 0.00017 | 0.00585 | 0.00329 | 0.00224 | 0.00901 | 0.00949 | 3.98 |
| 6.06 | 0.00026 | 0.00015 | 0.00558 | 0.00356 | 0.00310 | 0.01071 | 0.01143 | 4.17 |
| 6.96 | 0.00027 | 0.00014 | 0.00528 | 0.00447 | 0.00406 | 0.01308 | 0.01350 | 5.46 |
| 8.00 | 0.00025 | 0.00013 | 0.00520 | 0.00513 | 0.00457 | 0.01672 | 0.01655 | 5.71 |
| 9.19 | 0.00027 | 0.00015 | 0.00559 | 0.00549 | 0.00442 | 0.02042 | 0.02020 | 4.47 |
| 10.56 | 0.00025 | 0.00015 | 0.00531 | 0.00489 | 0.00358 | 0.02477 | 0.02349 | 3.86 |
| 12.13 | 0.00023 | 0.00013 | 0.00361 | 0.00367 | 0.00230 | 0.02949 | 0.02789 | 3.50 |
| 13.93 | 0.00024 | 0.00015 | 0.00212 | 0.00293 | 0.00160 | 0.03544 | 0.03415 | 3.27 |
| 16.00 | 0.00018 | 0.00016 | 0.00117 | 0.00222 | 0.00129 | 0.04418 | 0.04226 | 3.03 |
| 18.38 | 0.00014 | 0.00017 | 0.00080 | 0.00158 | 0.00103 | 0.04955 | 0.05310 | 2.76 |
| 21.11 | 0.00016 | 0.00013 | 0.00051 | 0.00100 | 0.00088 | 0.05307 | 0.06641 | 2.17 |
| 24.25 | 0.00012 | 0.00014 | 0.00047 | 0.00050 | 0.00076 | 0.06902 | 0.08044 | 2.02 |
| 27.86 | 0.00013 | 0.00018 | 0.00024 | 0.00027 | 0.00056 | 0.07161 | 0.08698 | 1.65 |
| 32.00 | 0.00019 | 0.00005 | .. | .. | 0.00040 | 0.06848 | 0.09448 | 1.24 |
| 36.76 | 0.00015 | .. | .. | .. | 0.00014 | 0.05192 | 0.08781 | 1.12 |
| 42.22 | .. | .. | .. | .. | .. | 0.02286 | 0.07223 | 1.09 |
| 48.50 | .. | .. | .. | .. | .. | 0.00700 | 0.04609 | 1.02 |
| 55.72 | .. | .. | .. | .. | .. | .. | 0.01747 | 0.47 |
| 64.00 | .. | .. | .. | .. | .. | .. | .. | 0.70 |
| 73.52 | .. | .. | .. | .. | .. | .. | .. | 0.44 |
| 84.45 | .. | .. | .. | .. | .. | .. | .. | .. |
| 97.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 111.43 | .. | .. | .. | .. | .. | .. | .. | .. |
| 128.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 147.03 | .. | .. | .. | .. | .. | .. | .. | .. |
| 168.90 | .. | .. | .. | .. | .. | .. | .. | .. |
| 194.01 | .. | .. | .. | .. | .. | .. | .. | .. |
| 222.86 | .. | .. | .. | .. | .. | .. | .. | .. |
| 256.00 | .. | .. | .. | .. | .. | .. | .. | .. |
| 294.07 | .. | .. | .. | .. | .. | .. | .. | .. |
| 337.79 | .. | .. | .. | .. | .. | .. | .. | .. |
| 388.02 | .. | .. | .. | .. | .. | .. | .. | .. |
| 445.72 | .. | .. | .. | .. | .. | .. | .. | .. |
| 512.00 | .. | .. | .. | .. | .. | .. | .. | .. |

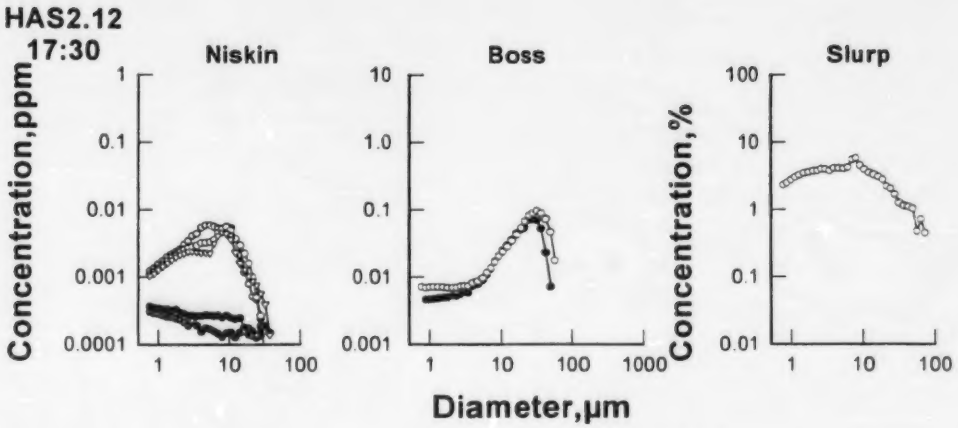


Figure 21. Disaggregated inorganic grain size distributions. The depth of sample is differentiated for the Niskin bottle samples by decreasing shade of grey, with the black circles indicating surface bottle and white circles the bottom. The CABLE sample is represented by inverted white triangles. For the BOSS samples the black circles are used for the 0.35-0.50 m above bottom sample and open circles are used for the 0.05-0.25 m sample.

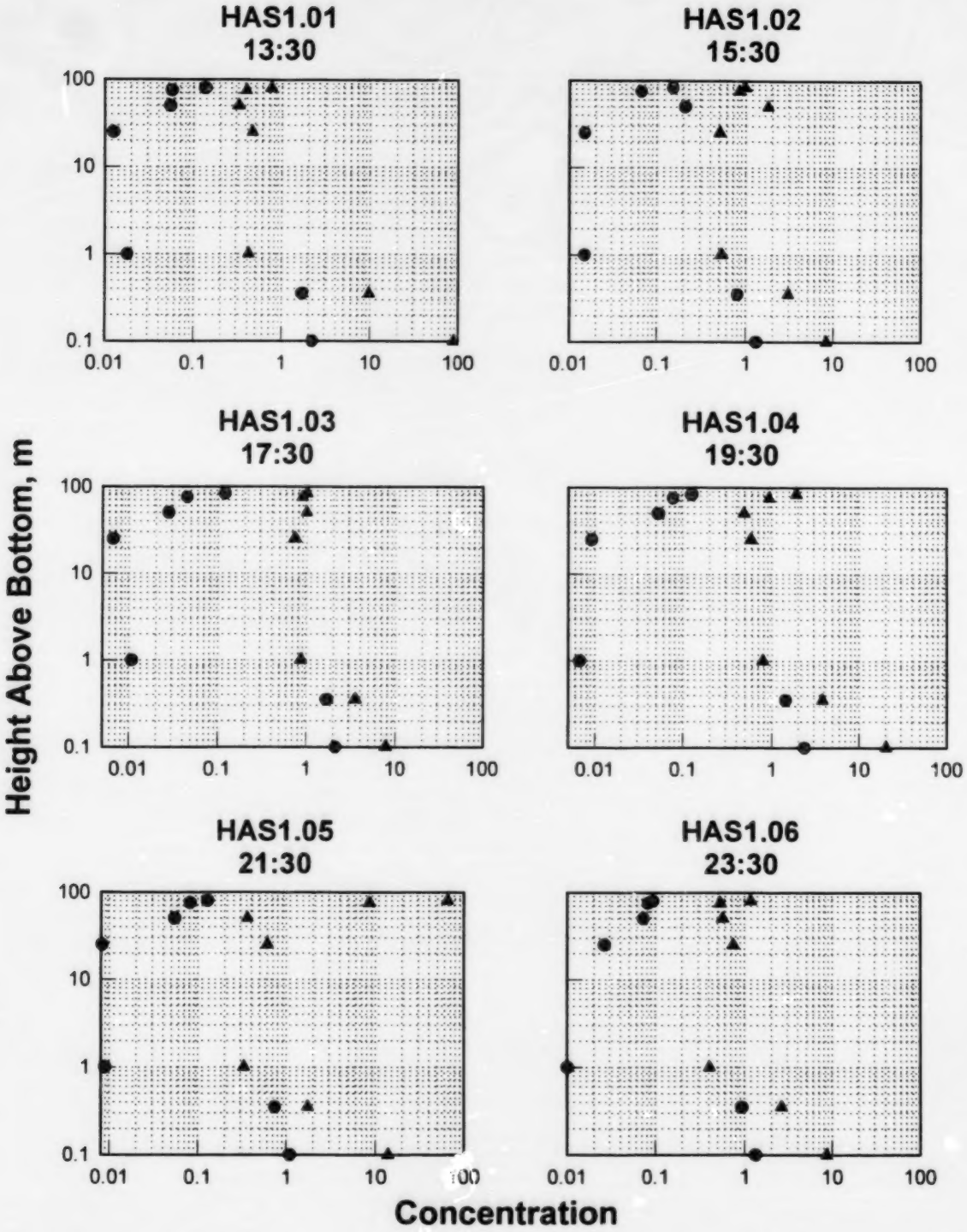


Figure 22. Total, SPM g $m^{-3}$, (triangles) and inorganic, PPM, (circles) concentration versus height above bottom plots for Niskin, CABLE and BOSS samples for Anchor Station 1.

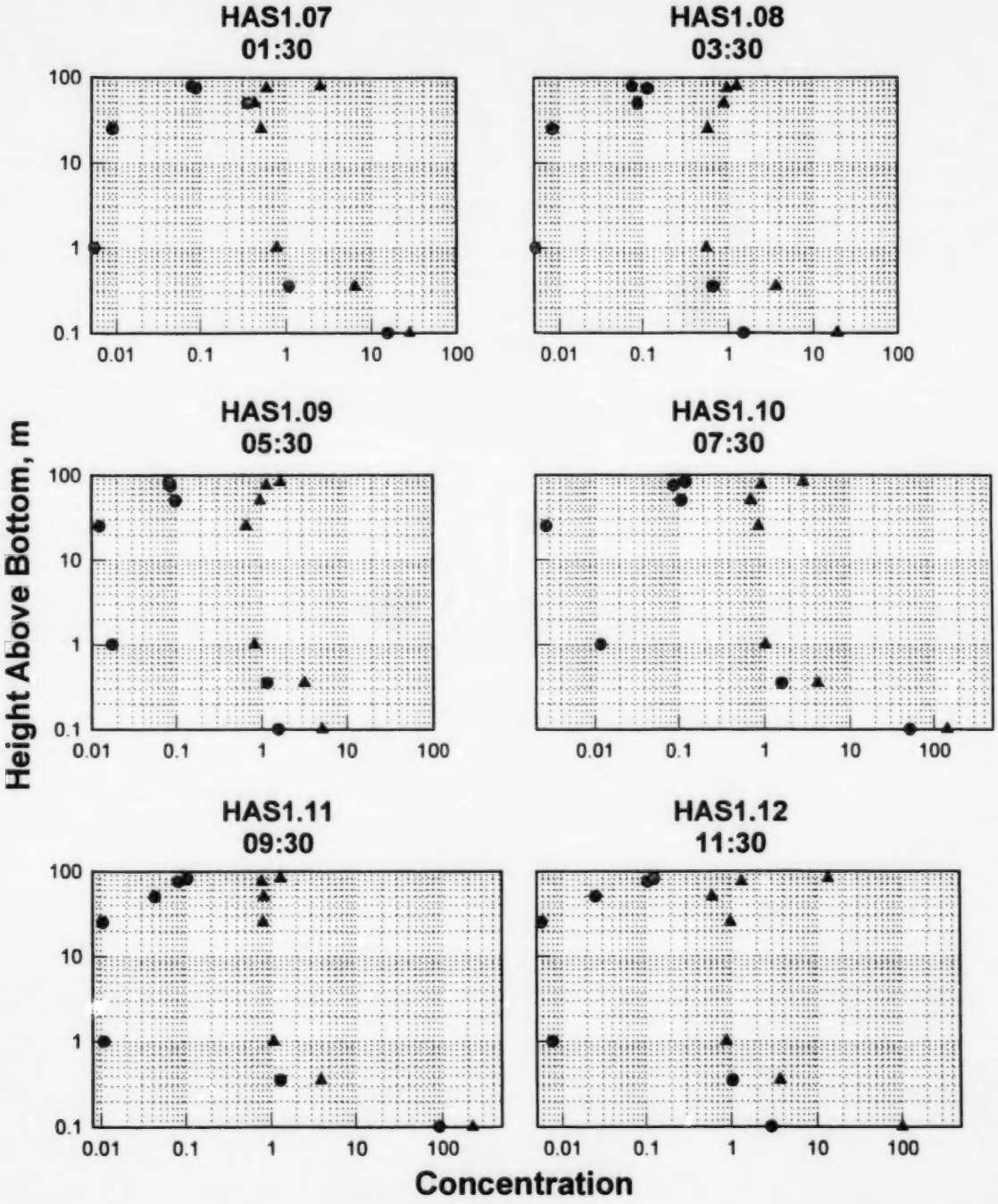


Figure 23. Total, SPM g $m^{-3}$, (triangles) and inorganic, PPM, (circles) concentration versus height above bottom plots for Niskin, CABLE and BOSS samples for Anchor Station 1.

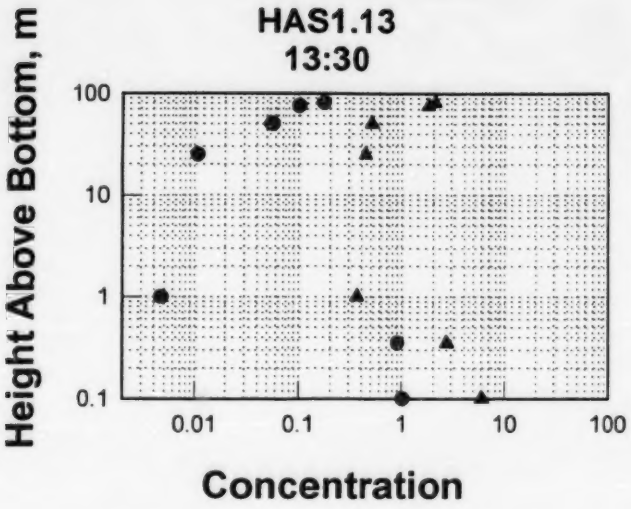


Figure 24. Total, SPM g $m^{-3}$, (triangles) and inorganic, PPM, (circles) concentration versus height above bottom plots for Niskin, CABLE and BOSS samples for Anchor Station 1.

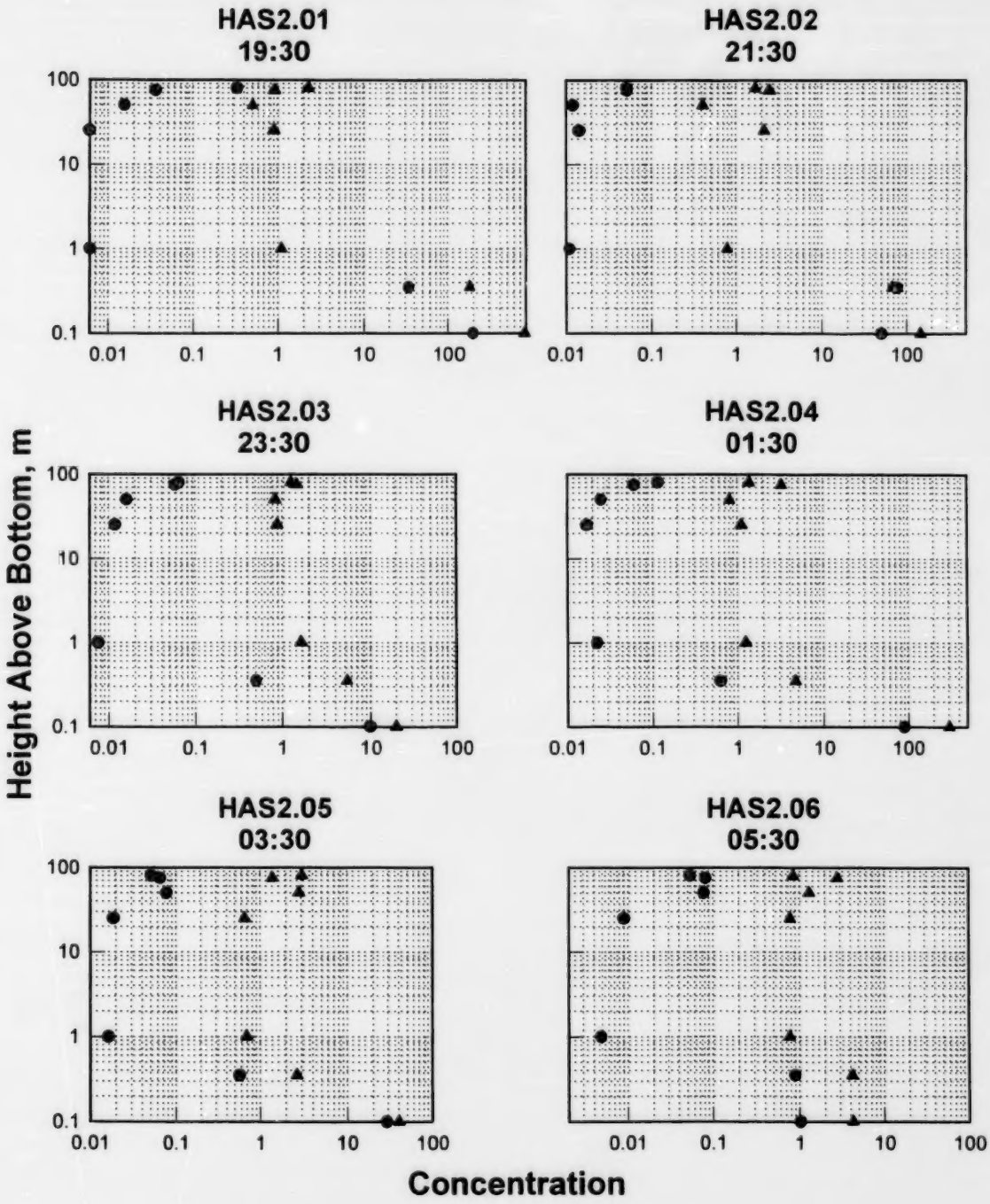


Figure 25. Total, SPM g $m^{-3}$, (triangles) and inorganic, PPM, (circles) concentration versus height above bottom plots for Niskin, CABLE and BOSS samples for Anchor Station 2.

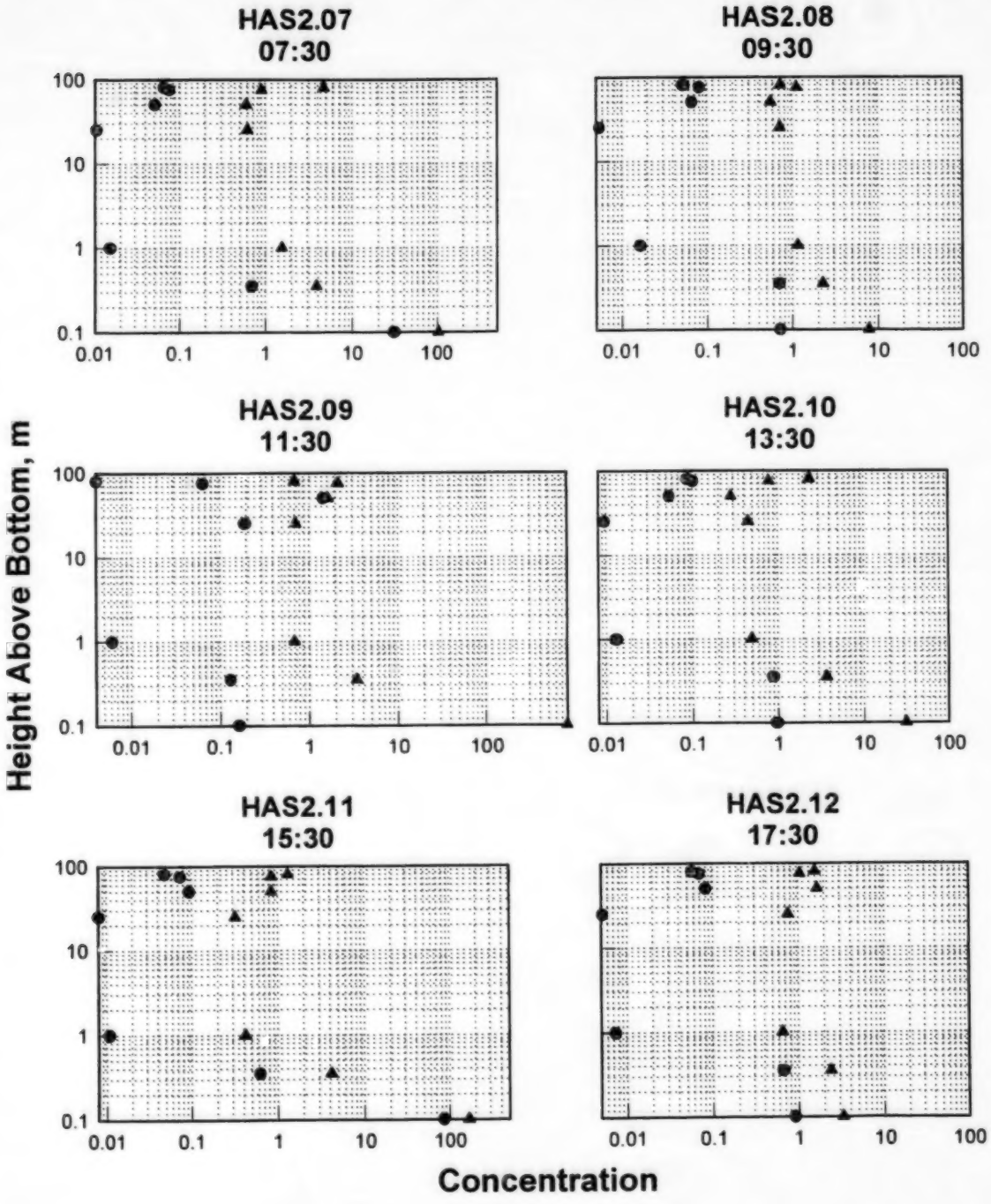


Figure 26. Total, SPM g $m^{-3}$, (triangles) and inorganic, PPM, (circles) concentration versus height above bottom plots for Niskin, CABLE and BOSS samples for Anchor Station 2.

Table 56. Bacterial Productivity ($^{3}$H thymidine) and Relative Heterotrophic Activity ($^{14}$C glutamic acid) experiment results for stations on the Hibernia North transect line.

**Hibernia North Transect**
**Bacterial Productivity ($^{3}$H thymidine)**

| Station | HN3 | | HN0 | | |
|---|---|---|---|---|---|
| (m) | ng C/L/hr | | (m) | ng C/L/hr | |
| Depth | avg | sd | Depth | avg | sd |
| 1 | 66.86 | 2.00 | 1 | 75.26 | 1.09 |
| 25 | 59.31 | 1.31 | 25 | 81.14 | 0.87 |
| 50 | 16.44 | 0.78 | 50 | 18.24 | 3.68 |
| 75.00 | 12.24 | 0.48 | 75.00 | 20.16 | 1.36 |
| 80.50 | 21.46 | 1.39 | 82.50 | 22.40 | 0.90 |

**Relative Heterotrophic Activity ($^{14}$C glutamic acid)**

| Station | HN0 | |
|---|---|---|
| (m) | ng/L/hr | |
| Depth | avg | sd |
| 1 | 17.21 | 1.17 |
| 25 | 15.35 | 2.09 |
| 50 | 3.62 | 0.22 |
| 75.00 | 4.79 | 0.67 |
| 82.50 | 4.05 | 0.42 |

Table 57. Bacterial Productivity ($^{3}$H thymidine) and Relative Heterotrophic Activity ($^{14}$C glutamic acid) experiment results for stations on the Hibernia South transect line.

**Hibernia South Transect**
**Bacterial Productivity ($^{3}$H thymidine)**

| Station | HS6 | | HS5 | | | HS3 | | | HS0 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m) | ng C/L/hr | | (m) | ng C/L/hr | | (m) | ng C/L/hr | | (m) | ng C/L/hr | |
| Depth | avg | sd | Depth | avg | Sd | Depth | avg | sd | Depth | avg | sd |
| 1 | 31.40 | 0.97 | 1 | 26.35 | 1.60 | 1 | 45.58 | 1.57 | 1 | 73.04 | 0.90 |
| 25 | 36.02 | 4.33 | 25 | 62.78 | 1.66 | 25 | 47.27 | 1.83 | 25 | 37.72 | 17.69 |
| 50 | 50.49 | 1.23 | 50 | 29.75 | 0.61 | 50 | 36.73 | 6.49 | 50 | 21.20 | 3.54 |
| 70.00 | 19.28 | 0.30 | 70.00 | 27.34 | 1.82 | 75.00 | 18.63 | 1.18 | 75.00 | 21.26 | 0.52 |
| 73.50 | 13.97 | 2.84 | 78.50 | 20.33 | 1.24 | 78.50 | 15.89 | 1.44 | 79.50 | 11.23 | 5.46 |

**Relative Heterotrophic Activity ($^{14}$C glutamic acid)**

| Station | HS6 | | HS0 | | |
|---|---|---|---|---|---|
| (m) | ng/L/hr | | (m) | ng/L/hr | |
| Depth | avg | sd | Depth | avg | Sd |
| 1 | 12.20 | 0.55 | 1 | 9.53 | 1.75 |
| 25 | 11.05 | 3.51 | 25 | 12.61 | 1.17 |
| 50 | 8.49 | 3.70 | 50 | 1.54 | 0.07 |
| 70.00 | 6.15 | 0.66 | 70.00 | 2.67 | 0.34 |
| 73.50 | 4.36 | 0.67 | 73.50 | 2.75 | 0.11 |

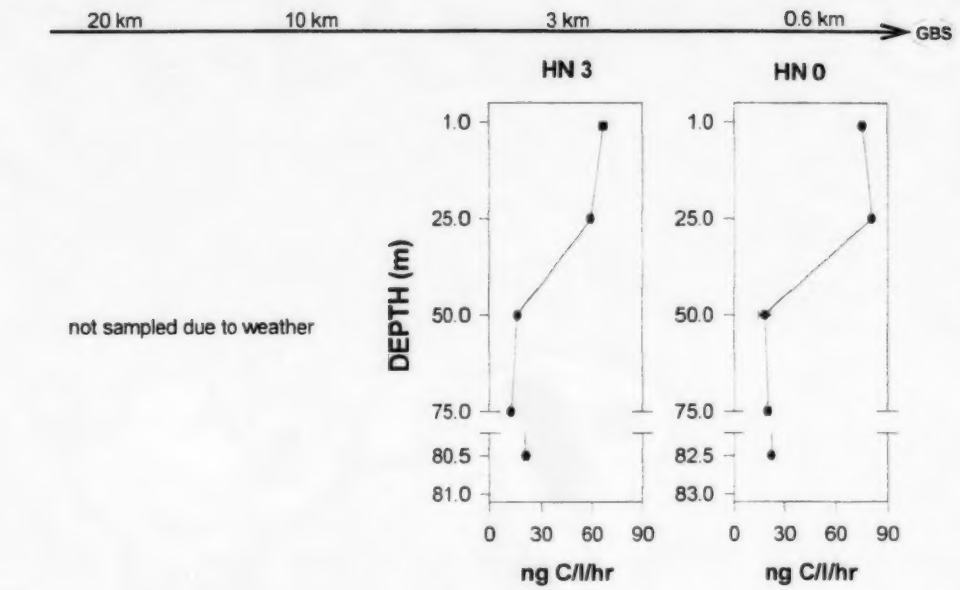


Figure 27. Bacterial Productivity ($^3$H thymidine) experiment results for transect stations HN3 to HN0.

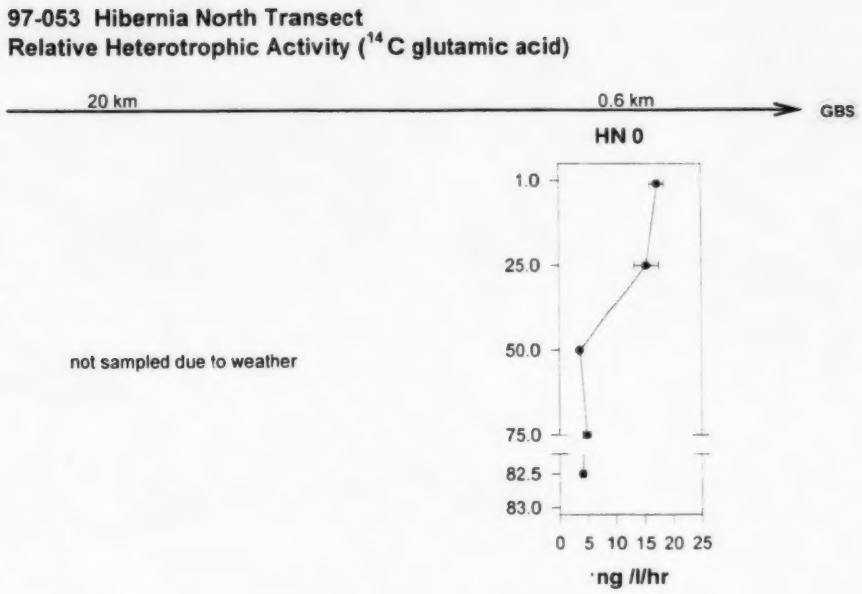


Figure 28. Relative Heterotrophic Activity ($^{14}$C glutamic acid) experiment results for transect station HN0.

Figure 29. Bacterial Productivity ($^3$H thymidine) experiment results for transect stations HS6 to HS0.

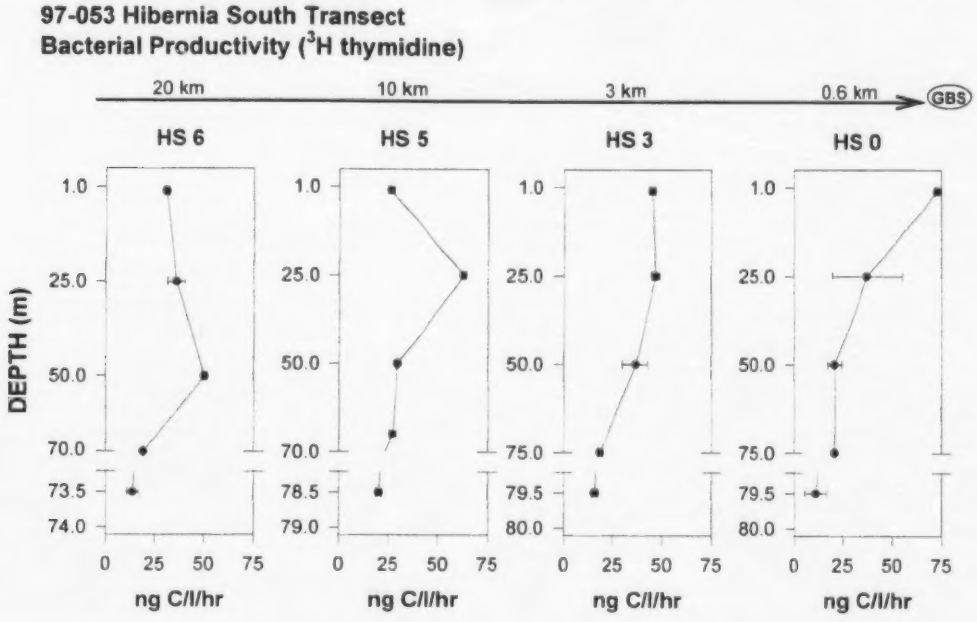

Figure 30. Relative Heterotrophic Activity ($^{14}C$ glutamic acid) experiment results for transect stations HS6 to HS0.

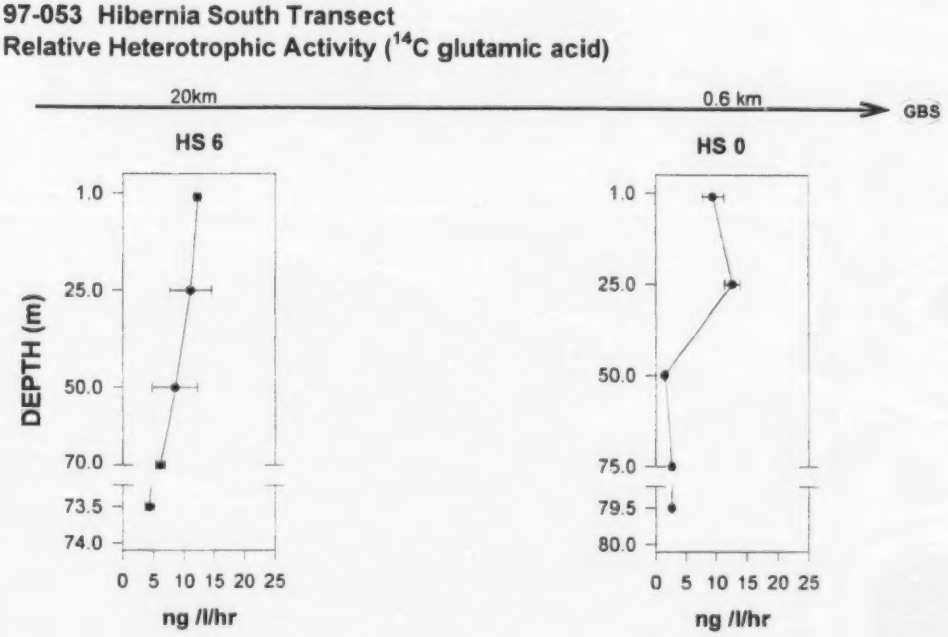

Table 58. Bacterial Productivity ($^3$H thymidine) experiment results for stations on the Hibernia East transect line.

**Hibernia East Transect**
**Bacterial Productivity ($^3$H thymidine)**

| Station | E6 | | | E5 | | | E3 | | | E0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m) | ng C/L/hr | | (m) | ng C/L/hr | | (m) | ng C/L/hr | | (m) | ng C/L/hr | |
| Depth | avg | sd | Depth | avg | Sd | Depth | avg | sd | Depth | avg | sd |
| 100.5 | 15.46 | 1.94 | 94.5 | 15.16 | 0.37 | 83.5 | 17.12 | 0.62 | 80.5 | 9.05 | 1.29 |

Table 59. Bacterial Productivity ($^3$H thymidine) and Relative Heterotrophic Activity ($^{14}$C glutamic acid) experiment results for stations on the Hibernia West transect line.

**Hibernia West Transect**
**Bacterial Productivity ($^3$H thymidine)**

| Station | HW6 | | | HW5 | | | HW3 | | | HW0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m) | ng C/L/hr | | (m) | ng C/L/hr | | (m) | ng C/L/hr | | (m) | ng C/L/hr | |
| Depth | avg | sd | Depth | avg | Sd | Depth | avg | sd | Depth | avg | sd |
| 1 | 38.63 | 2.21 | 1 | 41.60 | 1.12 | 1 | 35.43 | 8.95 | 1 | 64.87 | 1.43 |
| 25 | 68.11 | 2.36 | 25 | 56.20 | 1.93 | 25 | 67.21 | 1.39 | 25 | 59.12 | 2.65 |
| 50 | 17.87 | 1.41 | 50 | 20.78 | 0.78 | 50 | 30.15 | 2.67 | 50 | 16.12 | 3.03 |
| 75.00 | 25.37 | 1.51 | 74.00 | 27.96 | 1.54 | 75.00 | 29.27 | 1.91 | 75.00 | 17.20 | 0.63 |
| 79.50 | 24.76 | 0.63 | 76.50 | 15.06 | 0.43 | 79.50 | 18.10 | 0.39 | 81.50 | 11.15 | 0.21 |

**Relative Heterotrophic Activity ($^{14}$C glutamic acid)**

| Station | HW6 | | HW0 | | |
|---|---|---|---|---|---|
| (m) | ng/L/hr | | (m) | ng/L/hr | |
| Depth | avg | sd | Depth | avg | Sd |
| 1 | 6.05 | 0.23 | 1 | 5.76 | 0.58 |
| 25 | 6.38 | 1.08 | 25 | 5.14 | 0.39 |
| 50 | 2.43 | 0.18 | 50 | 1.52 | 0.06 |
| 75.00 | 2.80 | 0.14 | 75.00 | 2.07 | 0.61 |
| 79.50 | 2.95 | 0.16 | 81.50 | 0.99 | 0.34 |

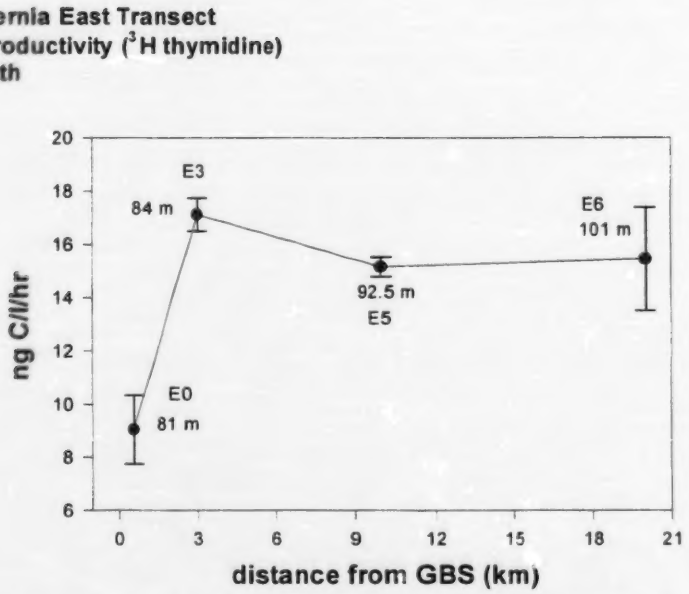


Figure 31. Bacterial Productivity ($^3$H thymidine) experiment results for CABLE samples on the Hibernia East transect line.

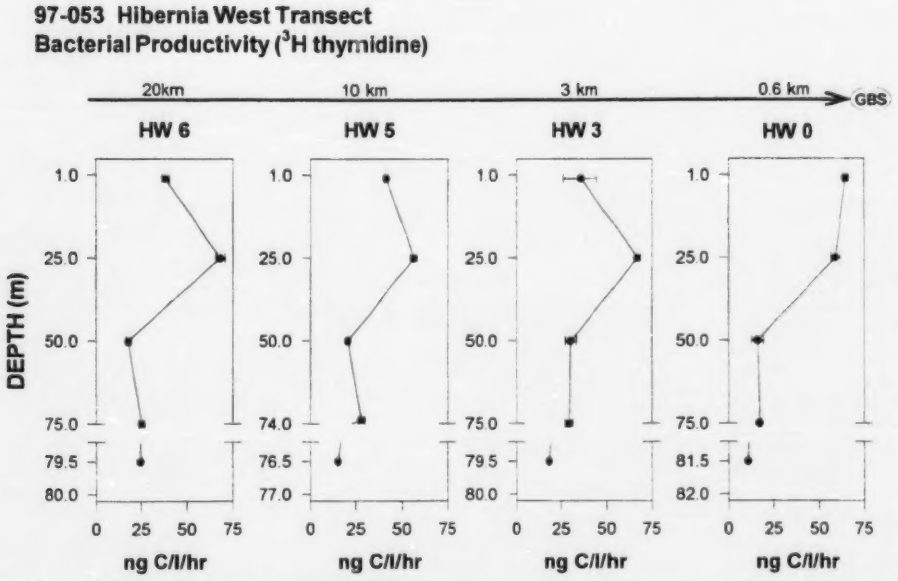


Figure 32. Bacterial Productivity ($^3$H thymidine) experiment results for transect stations HW6 to HW0.

Table 60. Bacterial Productivity ($^{3}H$ thymidine) and Relative Heterotrophic Activity ($^{14}C$ glutamic acid) experiment results for Anchor Station HAS1 (1 km) from the GBS.

**Hibernia Anchor Station 1**
**Bacterial Productivity ($^{3}H$ thymidine)**

| HAS 1-1 | | | HAS 1-4 | | | HAS 1-7 | | | HAS 1-10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m) | ng C/L/hr | | (m) | ng C/L/hr | | (m) | ng C/L/hr | | (m) | ng C/L/hr | |
| Depth | avg | sd | Depth | avg | Sd | Depth | avg | sd | Depth | avg | sd |
| 1 | 58.20 | 5.59 | 1 | 46.05 | 8.57 | 1 | 20.03 | 9.34 | 1 | 21.20 | 0.75 |
| 25 | 58.46 | 5.59 | 25 | 71.32 | 5.11 | 25 | 30.00 | 0.09 | 25 | 26.25 | 10.90 |
| 50 | 56.89 | 2.25 | 50 | 8.17 | 1.41 | 50 | 25.05 | 3.04 | 50 | 22.57 | 0.22 |
| 75.00 | 24.95 | 8.69 | 75.00 | 13.40 | 1.16 | 75.00 | 11.53 | 2.06 | 75.00 | 11.07 | 0.97 |
| 79.50 | 2.37 | 0.67 | 82.50 | 2.46 | 1.94 | 79.50 | 7.27 | 2.26 | 81.50 | 10.00 | 0.94 |
| 79.58 | 8.65 | 0.05 | 82.58 | 9.51 | 0.65 | 79.58 | 15.78 | 0.91 | 81.58 | 13.58 | 1.24 |
| 79.85 | 13.00 | 1.02 | 82.85 | 14.04 | 1.95 | 79.85 | 17.62 | 10.35 | 81.85 | 30.93 | 2.51 |

**Relative Heterotrophic Activity ($^{14}C$ glutamic acid)**

| HAS 1-1 | | | HAS 1-4 | | | HAS 1-7 | | | HAS 1-10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m) | ng/L/hr | | (m) | ng/L/hr | | (m) | ng/L/hr | | (m) | ng/L/hr | |
| Depth | avg | sd | Depth | avg | Sd | Depth | avg | sd | Depth | avg | sd |
| 1 | 5.24 | 0.07 | 1 | 4.39 | 1.82 | 1 | 7.05 | 4.88 | 1 | 3.54 | 0.77 |
| 25 | 3.60 | 0.25 | 25 | 4.33 | 0.92 | 25 | 6.92 | 0.85 | 25 | 3.01 | 0.03 |
| 50 | 2.07 | 0.04 | 50 | 0.70 | 0.14 | 50 | 3.70 | 1.30 | 50 | 2.21 | 0.94 |
| 75.00 | 1.19 | 0.16 | 75.00 | 1.46 | 0.46 | 75.00 | 1.54 | 0.63 | 75.00 | 1.46 | 0.07 |
| 79.50 | 1.52 | 0.49 | 82.50 | 1.63 | 0.61 | 79.50 | 2.40 | 0.27 | 81.50 | 1.72 | 0.55 |
| 79.58 | 8.97 | 0.19 | 82.58 | 1.62 | 0.08 | 79.58 | 6.83 | 0.20 | 81.58 | 5.27 | 1.28 |
| 79.85 | 0.99 | 0.23 | 82.85 | 5.54 | 0.10 | 79.85 | 10.80 | 0.41 | 81.85 | 22.87 | 2.14 |

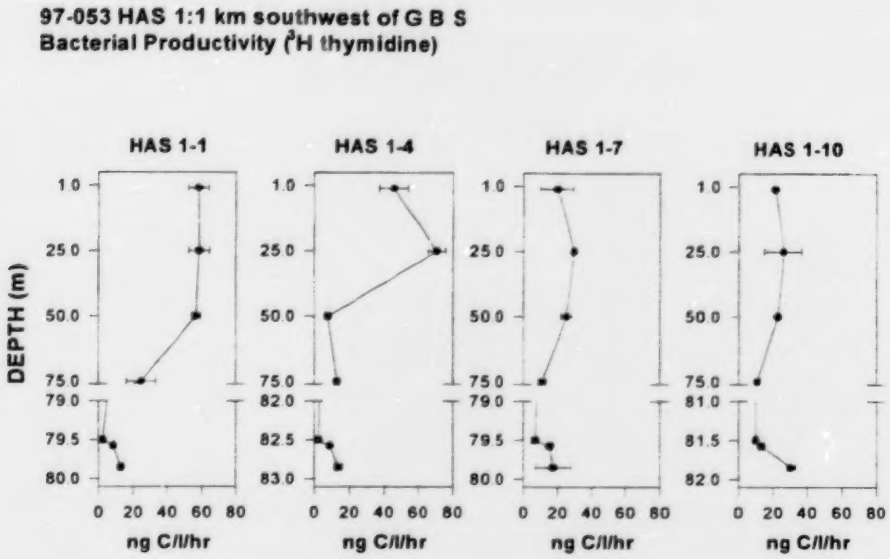


Figure 34. Bacterial Productivity ($^{3}$H thymidine) experiment results for Anchor Station HAS1.

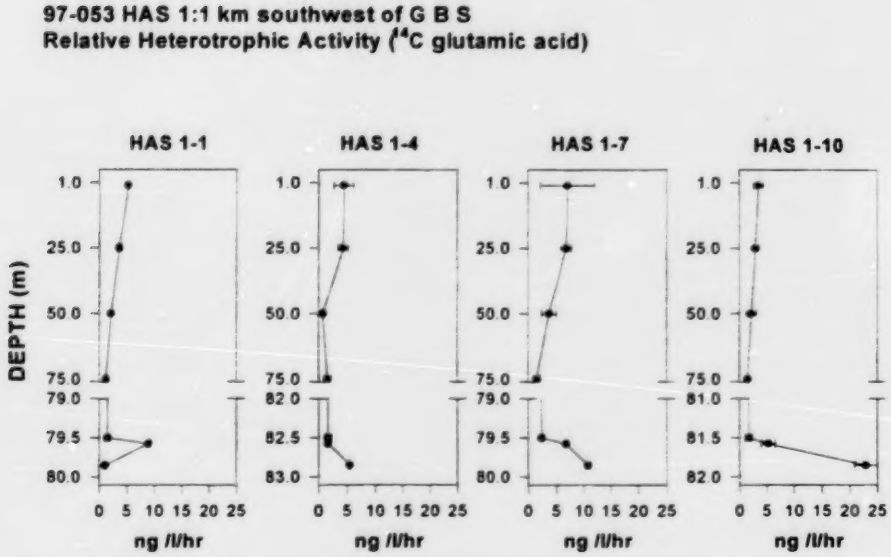


Figure 35. Relative Heterotrophic Activity ($^{14}$C glutamic acid) experiment results for Anchor Station HAS1.

Table 61. Bacterial Productivity ($^{3}H$ thymidine) and Relative Heterotrophic Activity ($^{14}C$ glutamic acid) experiment results for Anchor Station HAS2 (2.5 km) from the GBS.

**Hibernia Anchor Station 2**
**Bacterial Productivity ($^{3}H$ thymidine)**

| HAS 2-1 | | | HAS 2-4 | | | HAS 2-7 | | | HAS 2-10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m) | | ng C/L/hr | (m) | | ng C/L/hr | (m) | | ng C/L/hr | (m) | | ng C/L/hr |
| Depth | avg | sd | Depth | avg | Sd | Depth | avg | sd | Depth | avg | sd |
| 1 | 88.85 | 6.83 | 1 | 80.63 | 2.68 | 1 | 38.21 | 1.83 | 1 | 76.53 | 3.39 |
| 25 | 87.37 | 5.14 | 25 | 74.52 | 5.71 | 25 | 45.78 | 2.79 | 25 | 62.72 | 2.29 |
| 50 | 11.63 | 0.18 | 50 | 23.61 | 1.43 | 50 | 48.53 | 3.90 | 50 | 51.48 | 2.53 |
| 75.00 | 19.01 | 0.18 | 75.00 | 12.21 | 1.04 | 75.00 | 28.60 | 1.26 | 75.00 | 35.89 | 1.54 |
| 79.50 | 12.28 | 0.69 | 79.50 | 18.96 | 0.69 | 79.50 | 12.03 | 2.12 | 79.50 | 30.25 | 2.06 |
| 79.58 | 16.19 | 0.49 | 79.58 | 15.42 | 0.73 | 79.58 | 22.91 | 0.04 | 79.58 | 37.39 | 2.90 |
| 79.85 | 22.63 | 2.87 | 79.85 | 31.05 | 0.61 | 79.85 | 40.53 | 1.01 | 79.85 | 43.19 | 1.27 |

**Relative Heterotrophic Activity ($^{14}C$ glutamic acid)**

| HAS 2-1 | | | HAS 2-4 | | | HAS 2-7 | | | HAS 2-10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m) | | ng/L/hr | (m) | | ng/L/hr | (m) | | ng/L/hr | (m) | | ng/L/hr |
| Depth | avg | sd | Depth | avg | Sd | Depth | avg | sd | Depth | avg | sd |
| 1 | 7.58 | 2.03 | 1 | 7.16 | 1.93 | 1 | 8.39 | 1.26 | 1 | 9.30 | 1.80 |
| 25 | 9.85 | 3.86 | 25 | 7.77 | 0.77 | 25 | 7.62 | 1.04 | 25 | 9.55 | 2.23 |
| 50 | 0.99 | 0.43 | 50 | 2.80 | 1.50 | 50 | 7.53 | 0.65 | 50 | 4.37 | 0.90 |
| 75.00 | 1.35 | 0.04 | 75.00 | 2.37 | 0.15 | 75.00 | 5.05 | 1.12 | 75.00 | 4.00 | 0.38 |
| 79.50 | 1.62 | 0.34 | 79.50 | 2.66 | 0.30 | 79.50 | 2.92 | 0.55 | 79.50 | 3.04 | 0.49 |
| 79.58 | 5.16 | 1.00 | 79.58 | 2.88 | 0.15 | 79.58 | 5.49 | 0.87 | 79.58 | 5.93 | 0.13 |
| 79.85 | 15.89 | 2.12 | 79.85 | 13.96 | 0.91 | 79.85 | 25.43 | 3.15 | 79.85 | 11.06 | 0.95 |

**97-053 HAS 2:2.5 km southwest of G B S**
**Bacterial Productivity ($^3$H thymidine)**

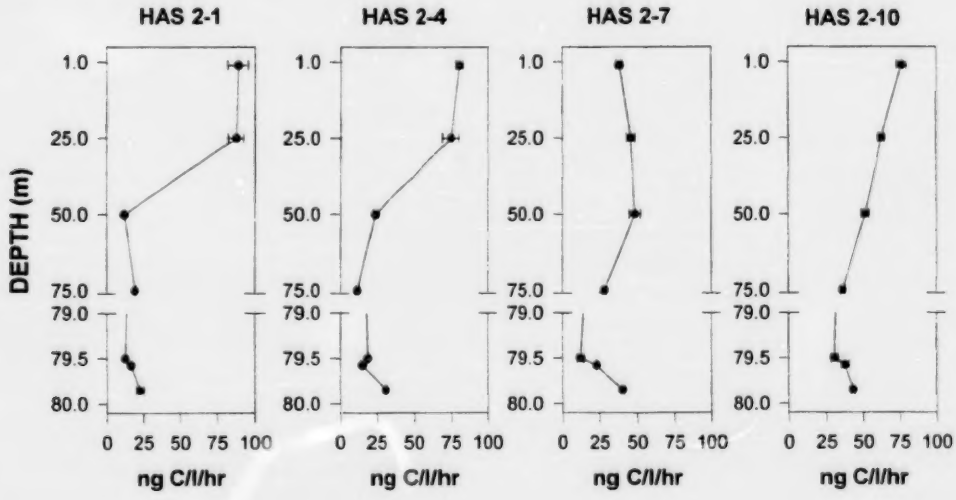


Figure 36. Bacterial Productivity ($^3$H thymidine) experiment results for Anchor Station HAS2.

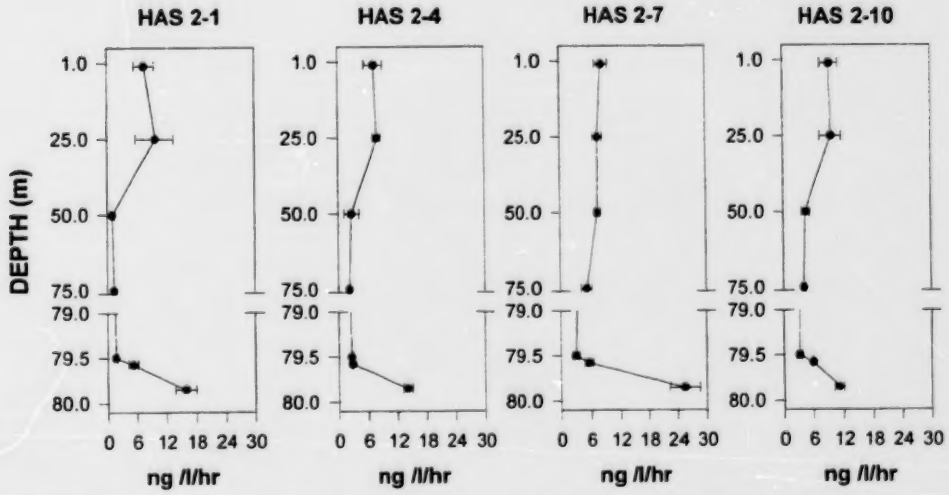


Figure 37. Relative Heterotrophic Activity ($^{14}$C glutamic acid) experiment results for Anchor Station HAS2.

Table 62. Relative Hydrocarbon Utilization Potential ($^{14}C$ hexadecane) experiment results for transect station HS6, anchor station HAS1-1 and anchor station HAS2-1.

**Hibernia South Transect HS6**
**Relative Hydrocarbon Utilization Potential ($^{14}C$ hexadecane)**

| Station | HS6 | |
|---|---|---|
| (m) Depth | ng/L/hr avg | sd |
| 1 | 0.94 | 0.22 |
| 25 | 2.61 | 0.85 |
| 50 | 9.67 | 1.49 |
| 70.00 | 29.87 | 14.89 |
| 73.50 | 26.21 | 8.85 |

**Hibernia Anchor Station HAS1-1**
**Relative Hydrocarbon Utilization Potential ($^{14}C$ hexadecane)**

| HAS 1-1 | | |
|---|---|---|
| (m) Depth | ng/L/hr avg | sd |
| 1 | 2.59 | 0.48 |
| 25 | 1.05 | 0.72 |
| 50 | 0.69 | 0.16 |
| 75.00 | 4.01 | 0.30 |
| 79.50 | 19.64 | 5.83 |
| 79.58 | 26.68 | 0.20 |
| 79.85 | 12.49 | 3.50 |

**Hibernia Anchor Station HAS2-1**
**Relative Hydrocarbon Utilization Potential ($^{14}C$ hexadecane)**

| HAS 2-1 | | |
|---|---|---|
| (m) Depth | ng/L/hr avg | sd |
| 1 | 2.81 | 1.13 |
| 25 | 8.29 | 5.19 |
| 50 | 4.92 | 1.62 |
| 75.00 | 8.37 | 3.98 |
| 79.50 | 7.85 | 2.71 |
| 79.58 | 4.88 | 1.83 |
| 79.85 | 8.42 | 0.97 |

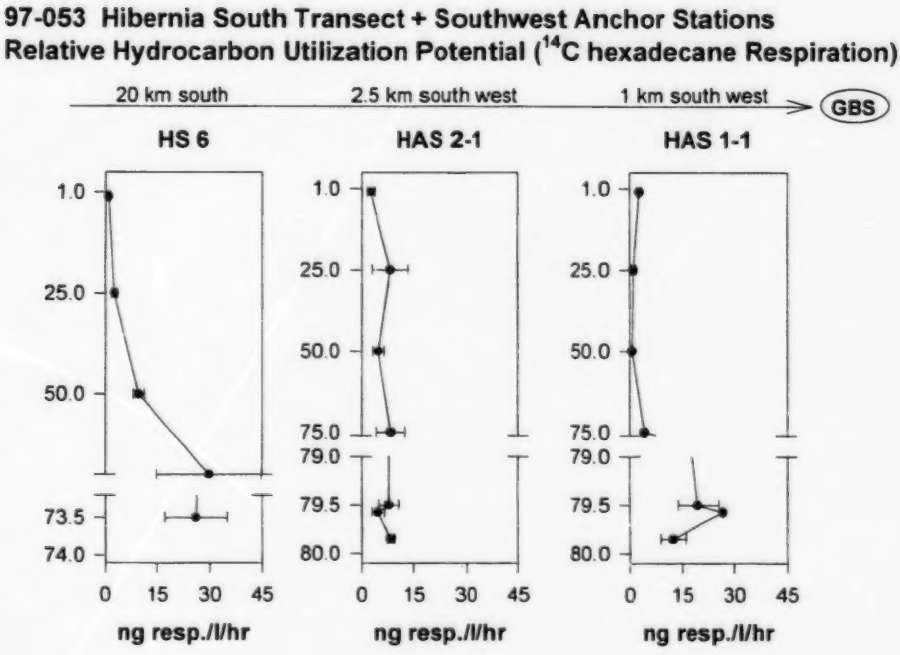


Figure 38. Relative Hydrocarbon Utilization Potential ($^{14}C$ hexadecane) experiment results for stations HS6, HAS1-1 and HAS2-1.

Table 63. Bacterial Abundance (Bacteria Cells/liter(*$10^8$)) for transect stations HN4 to HN0.

**Hibernia North Transect**

| Sampler | Depth(m) | Bacteria Cells / liter (x$10^8$) | | | | |
|---|---|---|---|---|---|---|
| | | HN4 | HN3 | HN2 | HN1 | HN0 |
| CTD | 1 | 1.52 | 1.72 | 1.68 | 2.11 | 2.35 |
| CTD | 25 | 1.63 | 1.83 | 1.67 | 1.80 | 1.90 |
| CTD | 50 | 1.80 | 1.19 | 1.24 | 1.39 | 1.38 |
| CTD | 75 | 1.31 | 1.79 | 2.07 | 1.19 | 1.94 |
| CABLE | (<0.5) | 2.13 | 2.09 | 2.12 | 1.66 | 1.96 |

Cable depths range 80.5-82.5m.

Table 64. Bacterial Abundance (Bacteria Cells/liter(*$10^8$)) for transect stations HS6 to HS0.

**Hibernia South Transect**

| Sampler | Depth(m) | Bacteria Cells / liter (x$10^8$) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | HS6 | HS5 | HS4 | HS3 | HS2 | HS1 | HS0 |
| CTD | 1 | 2.94 | 1.60 | 2.95 | 1.64 | 1.16 | 1.60 | 1.43 |
| CTD | 25 | 1.58 | 2.53 | 3.06 | 1.81 | 1.57 | 2.81 | 2.01 |
| CTD | 50 | 1.94 | 2.30 | 1.11 | 1.03 | 1.21 | 2.37 | 1.99 |
| CTD | 75 | **1.84 | **2.89 | | 2.63 | 1.50 | 2.37 | 2.69 |
| CABLE | (<0.5) | 2.79 | 1.72 | 1.28 | 1.36 | 2.48 | 1.31 | 2.38 |

Cable depths range 73.5-79.5m.

** The deepest CTD for HS6 and HS5 are at 70m not 75.

Table 65. Bacterial Abundance (Bacteria Cells/liter(*$10^8$)) for CABLE samples from transect stations HE6 to HE0.

**Hibernia East Transect**

| Sampler | Depth(m) | Bacteria Cells / liter (x$10^8$) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | HE6 | HE5 | HE4 | HE3 | HE2 | HE1 | HE0 |
| CABLE | (<0.5) | 1.62 | 1.38 | 1.49 | 1.44 | 1.61 | 1.95 | 1.47 |

Cable depths range 80.5-100.5m.

Table 66. Bacterial Abundance (Bacteria Cells/liter(*$10^8$)) for transect stations HW6 to HW0.

**Hibernia West Transect**

| Sampler | Depth(m) | Bacteria Cells / liter (x$10^8$) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | HW6 | HW5 | HW4 | HW3 | HW2 | HW1 | HW0 |
| CTD | 1 | 1.92 | 1.90 | 1.44 | 1.70 | 2.23 | 2.55 | 3.43 |
| CTD | 25 | 3.02 | 2.98 | 2.12 | 1.88 | 1.60 | 2.42 | 2.89 |
| CTD | 50 | 2.19 | 1.41 | 2.06 | 1.42 | 1.46 | 1.43 | 2.76 |
| CTD | 75 | 1.86 | 1.98 | 1.74 | 1.50 | 1.76 | 1.83 | 1.29 |
| CABLE | (<0.5) | 2.96 | 3.27 | 1.58 | 1.49 | 1.70 | 1.45 | 1.48 |

Cable depths range 77.5-81.5m.

Table 67. Bacterial Abundance (Bacteria Cells/liter($*10^8$)) for Anchor station HAS1.

**Hibernia Anchor Station HAS1**

| Sampler | Depth(m) | Bacteria Cells / liter (x$10^8$) | | | |
|---|---|---|---|---|---|
| | | HAS 1-1 | HAS 1-4 | HAS 1-7 | HAS 1-10 |
| CTD | 1 | 2.34 | 3.09 | 2.28 | 4.19 |
| CTD | 25 | 2.30 | 3.02 | 4.17 | 4.39 |
| CTD | 50 | 1.30 | 1.24 | 1.18 | 1.23 |
| CTD | 75 | 1.76 | 1.39 | 2.59 | 1.49 |
| BOSS | * (0.05-0.25) | 2.11 | 2.52 | 1.49 | 1.33 |
| BOSS | (0.35-0.50) | 2.82 | 1.74 | 2.05 | 2.80 |
| CABLE | 79.5 | 2.90 | 1.50 | 1.41 | 2.61 |

* Depths in brackets are distance above the substrate, all other depths are from the surface.

Table 68. Bacterial Abundance (Bacteria Cells/liter($*10^8$)) for Anchor station HAS2.

**Hibernia Anchor Station HAS2**

| Sampler | Depth(m) | Bacteria Cells / liter (x$10^8$) | | | |
|---|---|---|---|---|---|
| | | HAS 2-1 | HAS 2-4 | HAS 2-7 | HAS 2-10 |
| CTD | 1 | 2.43 | 1.67 | 2.21 | 2.58 |
| CTD | 25 | 2.45 | 2.49 | 3.02 | 2.81 |
| CTD | 50 | 1.31 | 1.30 | | 1.02 |
| CTD | 75 | 2.13 | 1.72 | 1.62 | 2.06 |
| BOSS | (0.05-0.25) | 1.81 | 1.32 | 2.05 | 1.47 |
| BOSS | (0.35-0.50) | 1.81 | 1.64 | 1.98 | 2.11 |
| CABLE | 79.5 | 1.67 | 1.88 | 1.59 | 1.59 |

Table 69. Trophic Manipulation Experiments. Bacterial Abundance (Bacteria Cells/liter($*10^8$))

**Hibernia Anchor Station HAS 1-1 (1km south of GBS)**

| Experiment #1 | Time 0 | Time 6 | Time 12 | Time 24 | Time 36 |
|---|---|---|---|---|---|
| BBL | 2.07 | 1.78 | 2.31 | 2.43 | 1.68 |
| BBL/FBBL | 1.92 | 1.91 | 1.85 | 1.85 | 1.89 |
| BBL/FDW | 1.33 | 1.26 | 1.31 | 1.32 | 1.18 |
| BBL/OM | 2.23 | 2.23 | 2.61 | 1.92 | 1.01 |
| DW | 1.3 | 1.42 | 1.47 | 1.98 | 2.63 |
| DW/FDW | 1.33 | 1.42 | 1.47 | 1.77 | 2.48 |

**Hibernia Anchor Station HAS 2-1 ( 2.5km south of GBS)**

| Experiment #2 | Time 0 | Time 6 | Time 12 | Time 24 | Time 36 |
|---|---|---|---|---|---|
| BBL | 0.97 | 1.02 | 2.19 | 1.17 | 1.08 |
| BBL/FBBL | 1 | 1.7 | 0.89 | 1.18 | 1.08 |
| BBL/FDW | 0.99 | 0.9 | 0.89 | 0.83 | 0.95 |
| BBL/OM | 1.16 | 1.94 | 1.38 | 1.51 | 0.81 |
| DW | 1.09 | 0.9 | 0.93 | 0.97 | 0.62 |
| DW/FDW | 0.98 | 1.55 | 1 | 0.91 | 0.82 |

**Hibernia South transect HS6 (20km south of GBS)**

| Experiment #3 | Time 0 | Time 6 | Time 12 | Time 24 | Time 36 |
|---|---|---|---|---|---|
| BBL | 1.45 | 1.83 | 1.15 | 2.16 | 0.98 |
| BBL/FBBL | 2.07 | 1.72 | 1.14 | 1.74 | 1.16 |
| BBL/FDW | 2.16 | 2.13 | 1.5 | 2.15 | 2.65 |
| BBL/OM | 1.8 | 1.88 | 1.83 | 1.99 | 0.85 |
| DW | 1.79 | 1.77 | 1.28 | 3.36 | 4 |
| DW/FDW | 1.88 | 2.02 | 1.23 | 2.66 | 5.29 |

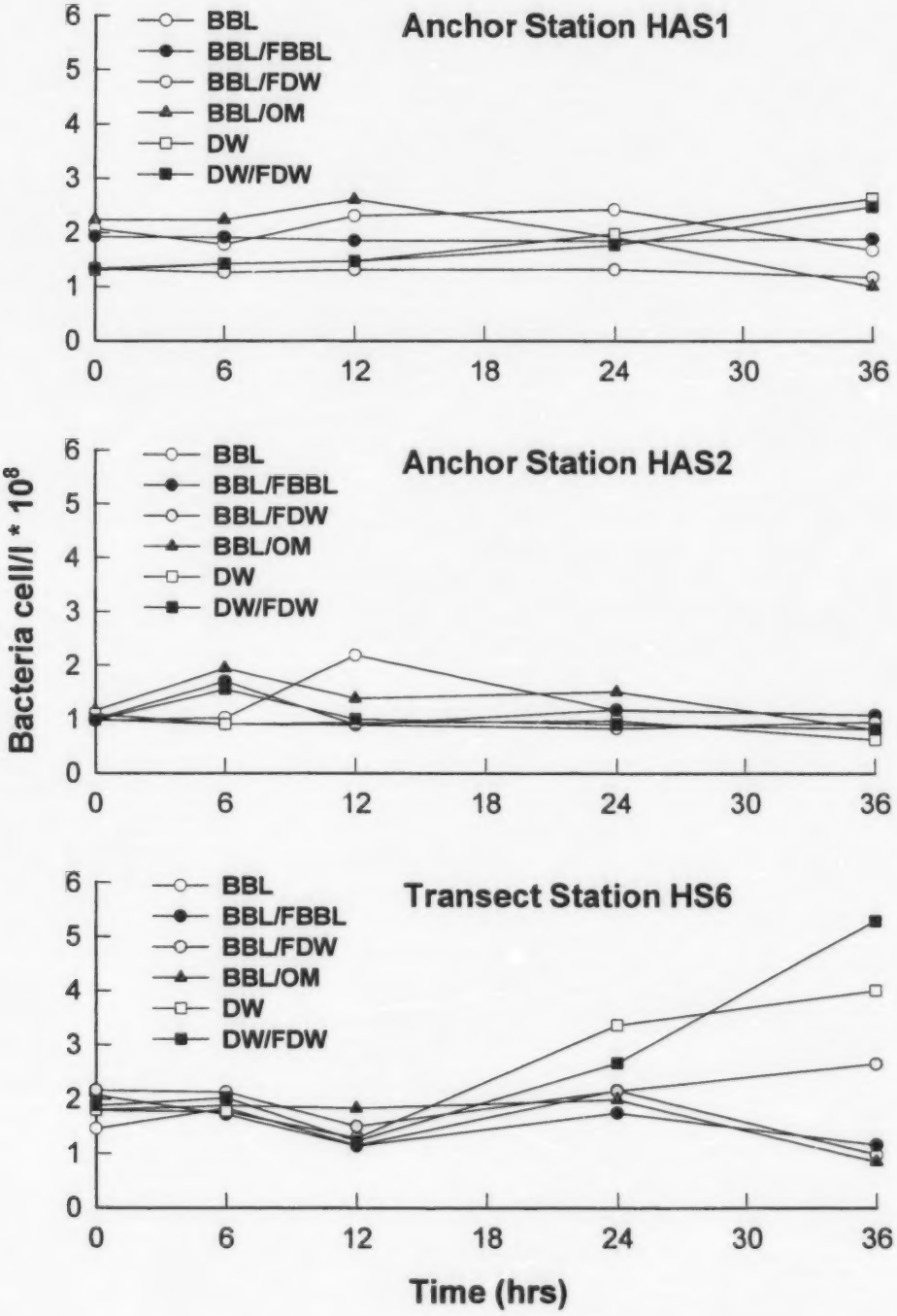


Figure 39. Trophic Manipulation Experiments for Anchor stations HAS1-1, HAS2-1 and transect station HS6.

Table 70. Nutrient values for transect stations HN4 to HN0.

**Hibernia North Transect**
**Nutrients**

| Station | HN4 | | | HN3 | | | | HN2 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N | (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N | (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N |
| 1 | 0.50 | 0.60 | 0.03 | 1 | 0.29 | 0.51 | 0.00 | 1 | 0.41 | 0.49 | 0.16 |
| 25 | 0.48 | 0.51 | 0.00 | 25 | - | - | - | 25 | 0.38 | 0.53 | 0.05 |
| 50 | 0.41 | 0.51 | 0.00 | 50 | 2.39 | 1.26 | 9.98 | 50 | 2.38 | 1.20 | 9.55 |
| 75.00 | 1.83 | 1.12 | 8.17 | 75.00 | 2.25 | 1.15 | 10.27 | 75.00 | 2.56 | 1.32 | 11.70 |
| 81.50 | 2.47 | 1.37 | 11.72 | 80.50 | 2.53 | 1.30 | 11.91 | 81.50 | 2.68 | 1.37 | 11.92 |

**Nutrients**

| Station | HN1 | | | HN0 | | | |
|---|---|---|---|---|---|---|---|
| (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N | (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N |
| 1 | 0.36 | 0.51 | 0.04 | 1 | 0.38 | 0.45 | 0.05 |
| 25 | 0.31 | 0.41 | 0.02 | 25 | 0.43 | 0.46 | 0.05 |
| 50 | 2.03 | 1.11 | 7.90 | 50 | 2.15 | 1.00 | 7.10 |
| 75.00 | 2.25 | 1.06 | 9.70 | 75.00 | 2.12 | 0.93 | 8.74 |
| 82.50 | 2.67 | 1.14 | 10.97 | 82.50 | 2.28 | 1.03 | 9.48 |

Table 71. Nutrient values for transect stations HS6 to HS0.

**Hibernia South Transect**
**Nutrients**

| Station | HS6 | | | HS5 | | | | HS4 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N | (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N | (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N |
| 1 | 0.24 | 0.51 | 0.28 | 1 | 2.31 | 0.14 | 0.12 | 1 | 0.24 | 0.24 | 0.13 |
| 25 | 0.25 | 0.37 | 0.32 | 25 | 0.25 | 0.19 | 0.15 | 25 | 0.19 | 0.19 | 0.11 |
| 50 | 1.07 | 0.97 | 6.91 | 50 | 1.03 | 0.83 | 5.74 | 50 | 0.47 | 0.46 | 1.11 |
| 70.00 | 1.20 | 1.03 | 8.82 | 70.00 | 1.30 | 1.04 | 9.48 | 75.00 | 1.63 | 0.97 | 8.75 |
| 73.50 | 1.29 | 1.18 | 9.94 | 78.50 | 3.39 | 0.36 | 3.95 | 77.50 | 1.27 | 0.58 | 5.53 |

**Nutrients**

| Station | HS3 | | | HS2 | | | | HS1 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N | (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N | (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N |
| 1 | 0.17 | 0.20 | 0.12 | 1 | 0.21 | 0.23 | 0.13 | 1 | 0.36 | 0.32 | 0.29 |
| 25 | 0.23 | 0.16 | 0.10 | 25 | 0.20 | 0.19 | 0.09 | 25 | 0.25 | 0.22 | 0.11 |
| 50 | 0.41 | 0.25 | 0.67 | 50 | 1.08 | 0.40 | 2.18 | 50 | 1.12 | 0.49 | 2.99 |
| 75.00 | 1.59 | 0.50 | 5.01 | 75.00 | 1.63 | 0.46 | 4.30 | 75.00 | 1.91 | 0.60 | 5.83 |
| 78.50 | 1.81 | 0.63 | 5.66 | 79.50 | 2.17 | 0.72 | 6.49 | 79.50 | 1.95 | 0.60 | 5.79 |

**Nutrients**

| Station | HS0 | | |
|---|---|---|---|
| (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N |
| 1 | 0.32 | 0.39 | 0.07 |
| 25 | 0.30 | 0.15 | 0.21 |
| 50 | 1.06 | 0.40 | 2.60 |
| 75.00 | 3.24 | 0.52 | 5.43 |
| 79.50 | 2.54 | 0.61 | 6.44 |

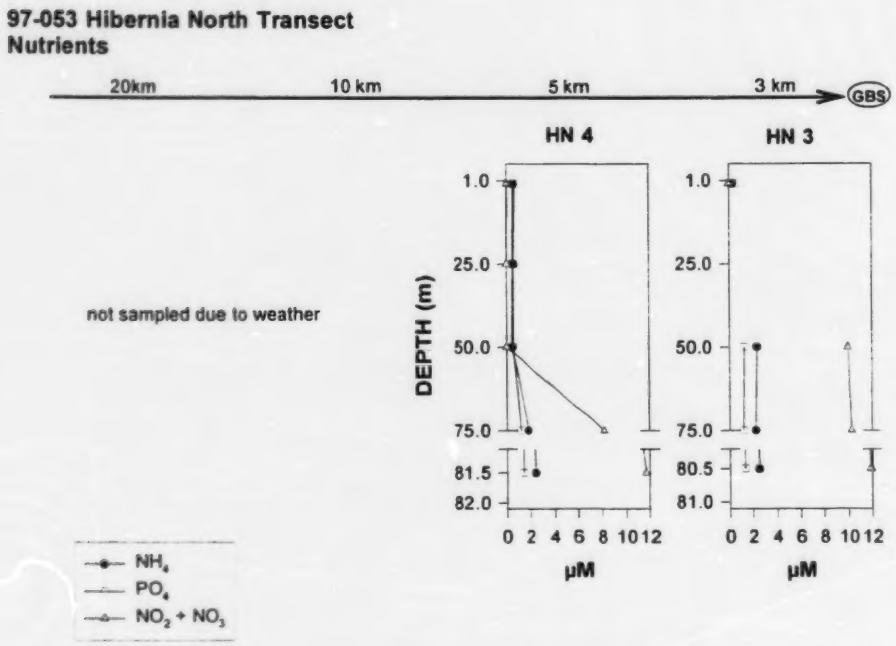


Figure 40. Nutrient values for transect stations HN4 and HN3.

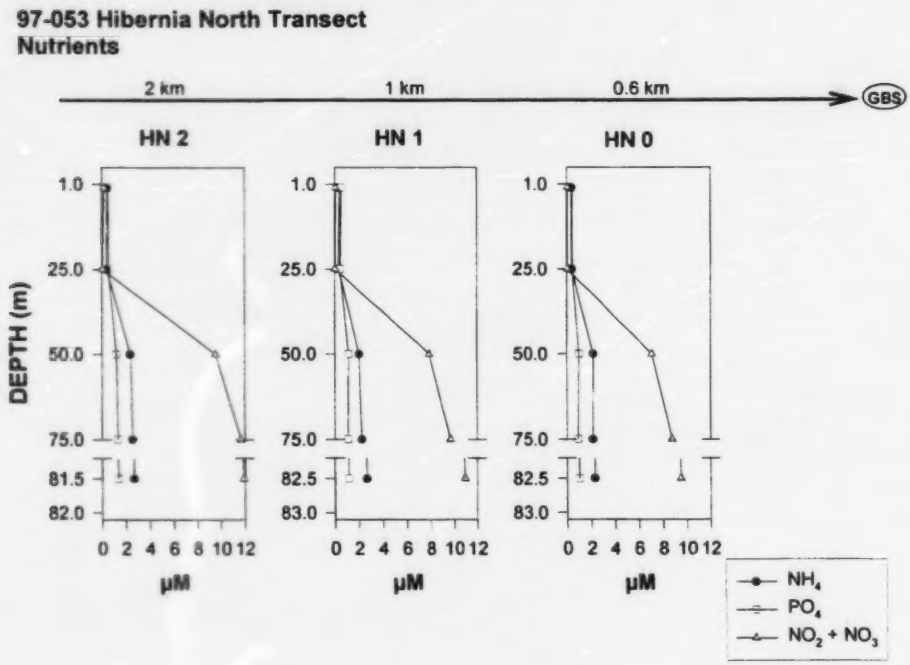


Figure 41. Nutrient values for transect stations HN2 to HN0.

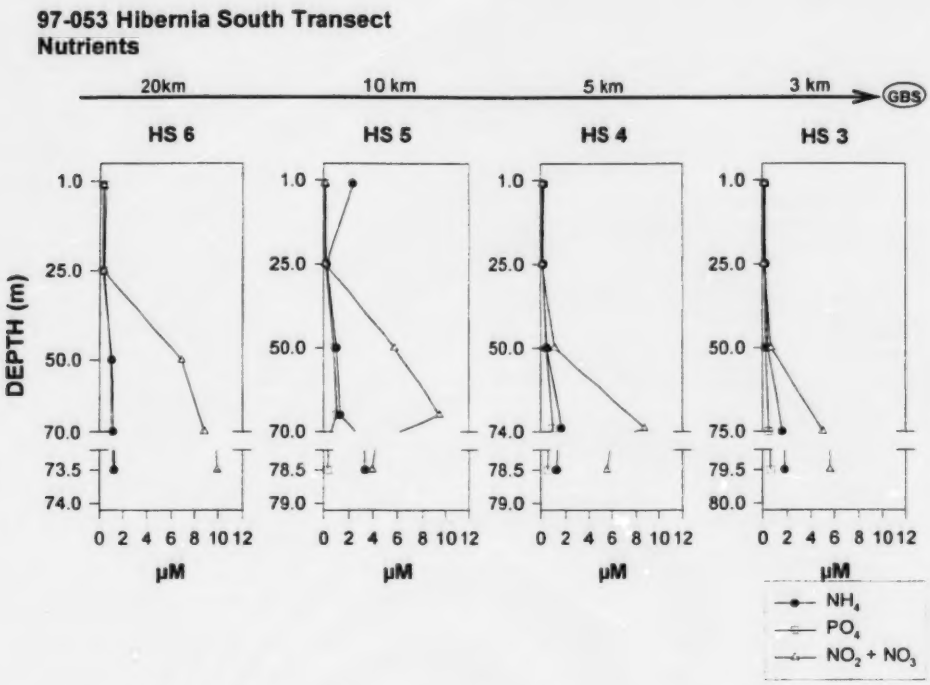


Figure 42. Nutrient values for transect stations HS6 to HS3.

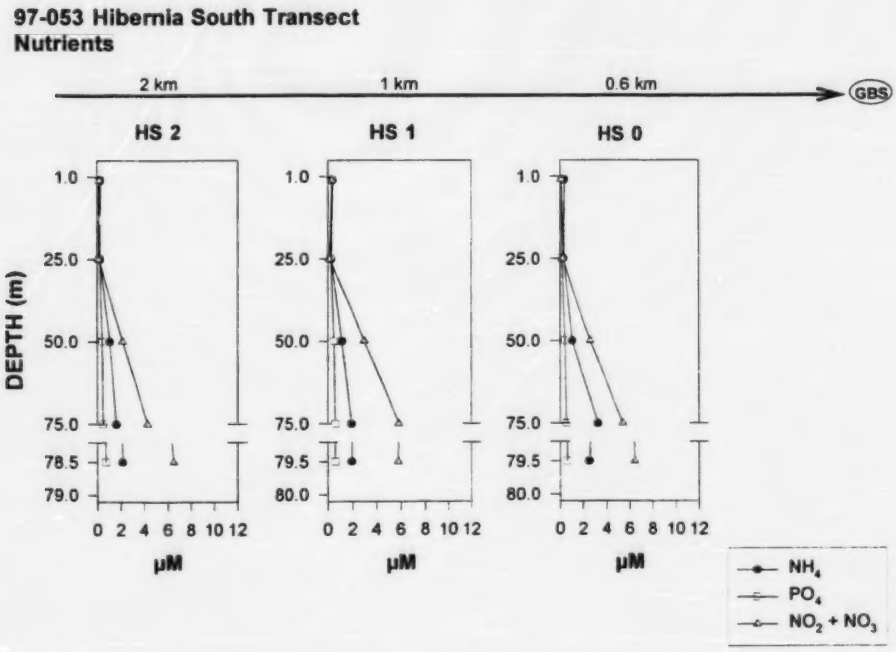


Figure 43. Nutrient values for transect stations HS2 to HS0.

Table 72. Nutrient values for CABLE samples from transect stations HE6 to HE0.

**Hibernia East Transect**
**CABLE Depth**

| Station # | Depth (m) | $NH_4$ µM | $PO_4$ µM | $NO_2$+$NO_3$ µM |
|---|---|---|---|---|
| HE6 | 101 | 2.11 | 1.21 | 11.53 |
| HE5 | 95 | 2.06 | 1.24 | 11.29 |
| HE4 | 89 | 2.15 | 1.34 | 12.06 |
| HE3 | 84 | 2.07 | 1.41 | 12.42 |
| HE2 | 85 | 2.25 | 1.35 | 12.12 |
| HE1 | 81 | 2.09 | 1.30 | 11.45 |
| HE0 | 81 | 2.22 | 1.37 | 12.00 |

Table 73. Nutrient values for transect stations HW6 to HW0.

**Hibernia West Transect**
**Nutrients**

| Station | HW6 | | | HW5 | | | | HW4 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N | (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N | (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N |
| 1 | 0.51 | 0.42 | 0.17 | 1 | 4.04 | 0.35 | 0.17 | 1 | 0.44 | 0.36 | 0.20 |
| 25 | 0.40 | 0.43 | 0.05 | 25 | 0.46 | 0.31 | 0.11 | 25 | 0.43 | 0.34 | 0.18 |
| 50 | 1.83 | 0.97 | 6.71 | 50 | 0.87 | 0.30 | 2.81 | 50 | 1.68 | 0.70 | 3.36 |
| 75.00 | 5.48 | 0.78 | 5.51 | 75.00 | 1.21 | 0.48 | 5.25 | 75.00 | 2.42 | 0.91 | 8.45 |
| 79.50 | 1.75 | 1.10 | 9.64 | 76.50 | 1.68 | 1.28 | 11.16 | 80.50 | 1.60 | 1.09 | 10.12 |

**Nutrients**

| Station | HW3 | | | HW2 | | | | HW1 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N | (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N | (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N |
| 1 | 0.38 | 0.35 | 0.20 | 1 | 0.38 | 0.41 | 0.18 | 1 | 0.54 | 0.50 | 0.19 |
| 25 | 0.42 | 0.36 | 0.32 | 25 | 0.39 | 0.38 | 0.21 | 25 | 0.55 | 0.46 | 0.21 |
| 50 | 1.38 | 0.89 | 6.07 | 50 | 1.84 | 1.03 | 8.75 | 50 | 1.95 | 1.01 | 6.73 |
| 75.00 | 1.67 | 0.91 | 8.81 | 75.00 | 2.35 | 1.04 | 9.68 | 75.00 | 3.20 | 1.35 | 11.43 |
| 79.50 | 1.73 | 1.00 | 9.08 | 80.50 | 2.64 | 1.19 | 10.99 | 80.50 | 2.87 | 1.22 | 10.14 |

**Nutrients**

| Station | HW0 | | |
|---|---|---|---|
| (m) Depth | (µM) $NH_4$ | $PO_4$ | $NO_2$+N |
| 1 | 0.24 | 0.39 | 0.11 |
| 25 | 0.34 | 0.45 | 0.15 |
| 50 | 2.34 | 1.03 | 6.95 |
| 75.00 | 2.87 | 1.26 | 10.80 |
| 81.50 | 2.79 | 1.35 | 11.46 |

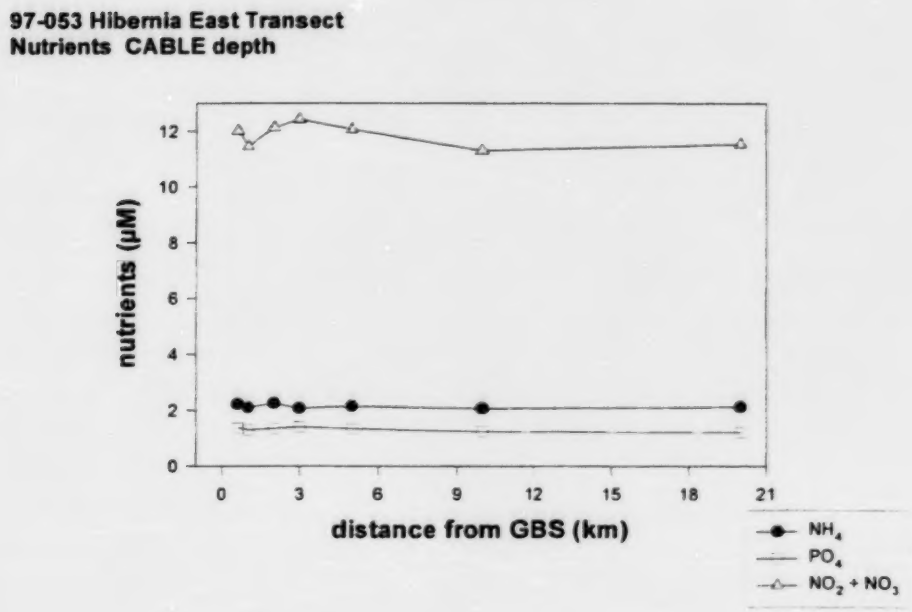


Figure 44. Nutrient values for CABLE samples from transect stations HE6 to HE0.

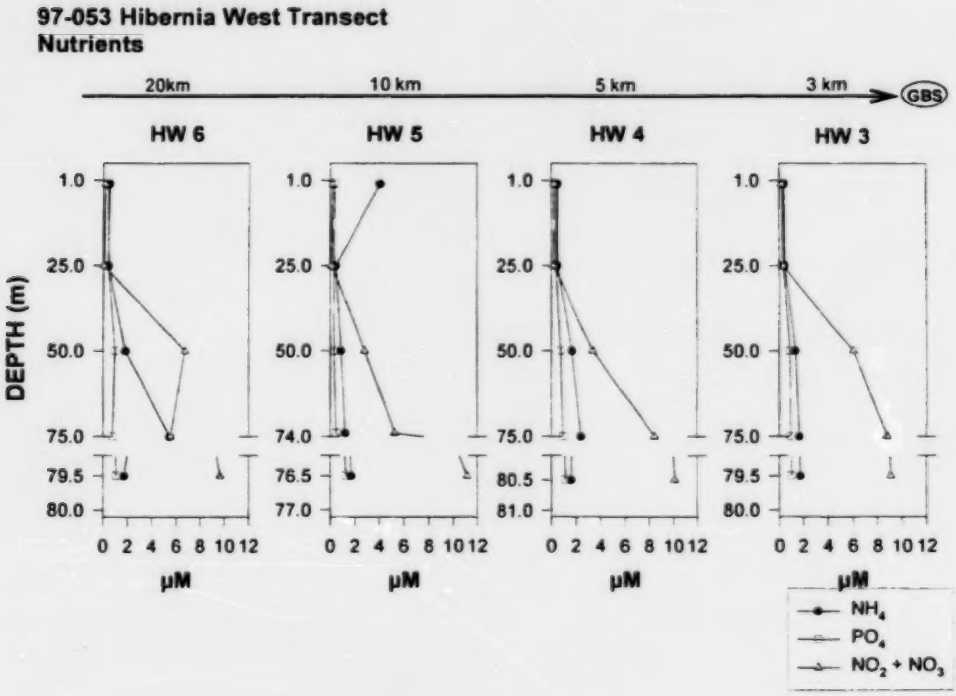


Figure 45. Nutrient values for transect stations HW6 to HW3.

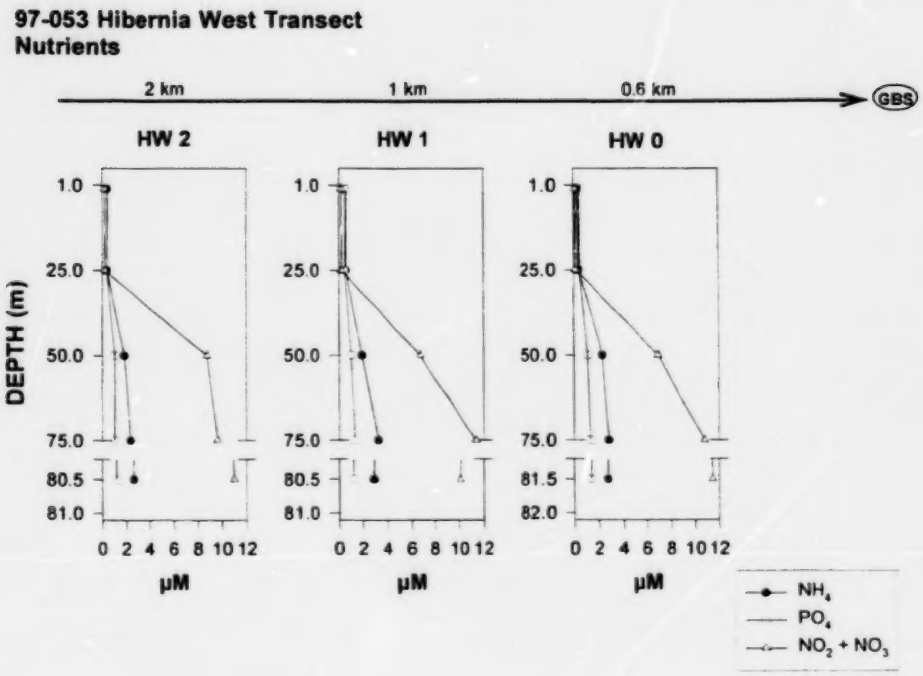


Figure 46. Nutrient values for transect stations HW2 to HW0.